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TO READERS AND CORRESPONDENTS.

Since our last we have received articles from Drs. Willard, Gardner, and Stone.

A number of reviews and critical notices intended for this number have necessarily been deferred until our next.

We are pleased to add to our list of exchanges, The New-York Dental Recorder, edited by C. C. Allen, M. D. This Journal, the 1st, 2d, and 3d Nos. of the second volume of which have reached us, bears marks of being edited with ability, and we hope it will receive the full patronage of the profession.

We have also received the first No. of the Dental Register of the West, published quarterly, by order of the Mississippi Valley Association of Dental Surgeons. Edited by James Taylor, M. D., D. D. S., Cincinnati, O.; and B. B. Brown, M. D., St. Louis, Mo. In looking over these Journals, we see much matter that would, we have no doubt, prove interesting and practically useful to our readers, and which, when space will permit, we shall use for the pages of the Journal.

Several books have reached us from their publishers, which will receive an early notice.

The following Journals have been received in Exchange :—
The London Medical Gazette.
The Provincial Medical and Surgical Journal.
The Dublin Medical Press.
The Dublin Quarterly Journal of Medical Science.
The London and Edinburgh Monthly Journal of Medical Science.
The Illinois Medical and Surgical Journal.
The New Orleans Medical Journal.
The Boston Medical and Surgical Journal.
The Western Journal of Medicine and Surgery.
The St. Louis Medical and Surgical Journal.
The Philadelphia Medical Examiner.
The Southern Journal of Medical Science.
The British American Journal of Medical and Physical Science.
The Southern Journal of Medicine and Pharmacy.
The American Journal of Pharmacy.
The American Journal and Library of Dental Science.
The Buffalo Medical and Surgical Journal.
The New-York Annalist.
Western Lancet.
Missouri Medical and Surgical Journal.
Stockton's Dental Intelligencer.
New-York Dental Recorder.
The Dental Register.
La Lancette Canadienne, Journal Medico-Chirurgical.

THE NEW-YORK
JOURNAL OF MEDICINE.

FOR JANUARY, 1848

PART FIRST.
Original Communications.

Art. I.—*A Catalogue of the principal known Medicinal Plants, native and exotic, growing in the State of New-York, with brief Notes on their Composition, Properties, etc.* By the Editor. (*Concluded.*)

Aquifoliaceæ, *De Cand.*—(The Holly Tribe.)

Ilex Opaca, *Ait.*, (American Holly). An evergreen tree, 10 to 30 feet high. A viscid substance called *bird-lime* is prepared from its inner bark. The leaves are bitter, and diaphoretic; *tonic*, contain a peculiar bitter principle, *ilicin;* berries are the size of a large pea, persistent, bright red, and are purgative, diuretic, and emetic; ten or twelve will generally prove cathartic. This plant has been employed successfully in the cure of intermittents, jaundice, and dropsy. Found near Kingsbridge, island of New York.

Prinos[*] **Verticillatus**, *Linn.*, (Black Alder, Common Winter Berry). This shrub has round berries, size of a pea, scarlet when ripe, and several clustered together.—*The bark.* Taste bitter and astringent, tonic and astringent, recommended in diarrhœa, dropsy, intermittents, and diseases connected with debility; a very useful remedy in cutaneous diseases, taken internally in form of strong decoction, and applied as a wash; also in gangrenous and ill-conditioned ulcers. The decoction should be made by boiling ℥ ij. of the bark in 3 pints of water to a quart. Dose ℥ ij. to ℥ iij. Dose of powder ʒ ss. to ʒi.

P. Glabra, *Linn*, (Inkberry, Evergreen Winterberry). Has the same medicinal properties as the above.

Ebenaceæ, *Vent.*—(The Ebony Tribe.)

Diospyros[†] **Virginiana**, *Linn.*, (Persimmon, U. S. P.). The *bark* and *fruit;* grows in moist places in the southern parts of the State.

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[*] From the Greek *prio*, to saw, the leaves being serrated.

[†] From the Greek *Dios*, Jupiter, and *pyros*, fruit, meaning heavenly fruit

Fruit roundish, about one inch in diameter, reddish orange when ripe, fleshy, very astringent until acted on by frost, then soft and luscious; when green the fruit is excessively astringent. In the southern and western States it is made into cakes with bran, and used in preparing beer, with the addition of water, hops, and yeast. A spiritous liquor is obtained by distilling the fermented infusion. The unripe fruit is recommended by Dr. Mettauer, of Va., in chronic dysentery, diarrhœa, and uterine hemorrhage, in form of infusion, syrup, or vinous tincture. Bark is used as a tonic in intermittents, and to make an astringent gargle in ulcerated sore throats, etc. The ripe fruit is grateful, and it is said, possesses anthelmintic properties.

PLANTAGINACEÆ, *Juss* —(THE PLANTAIN TRIBE.)

PLANTAGO MAJOR, *Linn.*, (Common Plantain). The leaves and root refrigerant, alterative, diuretic, and astringent, employed by the ancients in hemorrhages, visceral obstructions, phthisis, dysentery, etc.; externally to ulcers and scrofulous tumors, and as a dressing to blisters and sores, given in a strong decoction, or the expressed juice.

P. CORDATA, *Lam.*, (Heart-leaved Plantain.)

P. LANCEOLATA, *Linn.*, (Rib Grass, English Plantain). These two species have the same properties as the former, and may be substituted for them. The same remark will probably apply to the **P. VIRGINICA**, *Linn.*, (White Plantain.) **P. MARATIMA**, *Linn.*, (Sea Plantain,) and **P. PUSILLA**, *Nutt.*, (Dwarf Plantain).

PLUMBAGINACEÆ, *Juss.*—(THE LEADWORT TRIBE.)

STATICE LIMONIUM, *Linn.*, (Common Marsh Rosemary). This is the *S. Caroliniana* of Pursh, Bigelow, Griffith, and others. Found on our seacoast. The *root* bitter, and powerfully astringent; virtues imparted to water and alcohol. Contains 12 per cent. of tannin, no gallic acid. Bigelow thinks it equal in astringency to galls. A very useful remedy where powerful astringents are indicated, as the latter stages of diarrhœa, and as a gargle in ulcerated sore throat. Given in infusion, decoction, extract, or tincture.—(See *Dr. Mott's Inaug. Thesis, Experiment. Inquir. on Statice, &c.*)

OROBANCHACEÆ, *L. C. Rich.*—(THE BROOM RAPE TRIBE.)

OROBANCHE* **AMERICANA**, *Linn.*, (Squaw Root, Cancer Root). The plant has an unpleasant, nauseous, bitter, and astringent taste, used internally in bowel complaints. The powder has considerable reputation as a local application to cancerous ulcers. Supposed to have been an ingredient of *Martin's Cancer Powder*, (*Barton*), *Wood and Bache.* Astringent, antiseptic, antisyphilitic, considered at the west as a specific in gonorrhœa and syphilis.

EPIPHEGUS† **AMERICANA**, *Nutt.*, (Beech Drops, Cancer-root), has the same properties as the above; they are often confounded; though different species. (See *Torrey's Flora*). Has considerable reputation in dysentery and diarrhœa, etc., though its powers are probably overrated.

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* From the Greek *orobos*, a vetch, and *anchein*, to strangle, from its supposed injurious effects.

† From the Greek *epi*, upon, and *phegas*, the beech, because it grows upon the roots of this tree.

BIGNONIACEÆ, *Juss.*—(THE TRUMPET FLOWER TRIBE.)

CATALPA[*] SYRINGÆFOLIA, *Sims.*, (Catalpa, Indian Bean), more esteemed for ornament than use. The wood has a fine texture, and takes a good polish. Supposed to possess medicinal properties. The *seeds* have been employed with success in asthma— ℥ iv. of seeds to be boiled in ℥ xij. of water down to ℥ vi., the whole to be given night and morning. (*Jour. Phil. Col. Phar.* 6. 352.)

SCROPHULARIACEÆ, *R. Br.*—(THE FIGWORT TRIBE.)

VERBASCUM[†] THAPSUS, *Linn.*, (Common Mullein). The leaves and flowers have a slight narcotic smell, mucilaginous and bitter taste, impart their virtues to water by infusion; demulcent and emollient, and possess mild anodyne properties; hence used in catarrh and other pectoral complaints. The decoction of leaves is a good remedy in diarrhœa and dysentery, and a good anodyne external emollient. The flowers, when dried in the sun, yield a fatty oil, which is useful in piles. A good emollient ointment may also be prepared by boiling the leaves in lard.

The V. BLATTARIA, *Linn.*, (Moth Mullein), and B. LYCHNITIS, *Linn.*, (White Mullein), probably possess similar virtues.

SCROPHULARIA MARILANDICA, *Linn.*, (Figwort). This plant, which is nearly allied to the *S. Nudosa* of Europe, probably possesses similar virtues, i.e., is anodyne, diuretic, diaphoretic, tonic, anthelmintic, and alterative; hence employed in scrofula, from which circumstance its name is derived. The bruised root has considerable reputation in domestic practice, as a poultice for reducing inflammation in tumors.

LINARIA[‡] VULGARIS, *Maench*, (Common Toad Flax, Great Dragon). The herb, collected when in flower, tastes bitter, slightly acrid, and weakly saline, diuretic and cathartic. The infusion has been employed with success in dropsy, jaundice, and cutaneous affections, also in the latter as external fomentations, or an ointment, by boiling the flowers in lard. The flowers may be used for dying yellow.

COLLINSIA[§] VERNA, *Nutt.*, (Early parti-colored Collinsia). CHELONE[‖] GLABRA, *Linn.*, (Snake Head). Several varieties. The *leaves* inodorous, but very bitter, contain gallic acid and bitter extractive; tonic and cathartic; in small doses laxative and deobstruent. Rafinesque says it acts powerfully on the liver. It is much employed as a tonic by the Thomsonians, under the name of *Balmony*. The Shakers use it also, and put it up for sale. It deserves a fuller examination.

GRATIOLA VIRGINICA, *Linn.*, (Common Hedge Hyssop).

G. AUREA, *Muhl*, (Golden Hedge Hyssop). The European Hedge

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[*] Corruption of *catawba*, the Indian name for this tree.

[†] Altered from *barbascum*, the leaves being covered with a *barba* or beard.

[‡] From the Latin *linum*, flax, which the leaves resemble.

[§] In honor of *Z. Collins*, an eminent botanist of Philadelphia.

[‖] From the Greek *chelone*, a tortoise, the flower resembling the head of that animal.

Hyssop is an active, drastic cathartic, diuretic, and emetic, and contains *Veratria*. The above species have not been fully investigated, but if we mistake not, they will be found to possess similar properties. The *Aurea* certainly has very powerful properties, and we believe might be substituted for the *Officinalis*. We would recommend a tincture of it to be tried in rheumatism and gout, as it probably operates in a manner similar to colchicum and veratrum.

VERONICA OFFICINALIS, *Linn.*, (Common Speedwell). This plant has an astringent, warm, bitterish taste, and is considered diuretic, diaphoretic, tonic, and expectorant; formerly much employed in pectoral and cutaneous diseases, nephritic complaints, and wounds. Has been used as a substitute for tea.

V. BECCABUNGA, *Linn.*, (Brookline). A very succulent plant, forms a good emollient fomentation and poultice, formerly considered depurative and alterative.

V. PEREGRINA, *Linn.* Once employed in scrofulous affections. (See *Bart. Med. & Phys. Jour.* 3, *p.* 24.)

PAEDEROTA VIRGINICA, *Torrey*, (Culver's Root, or Physic, formerly Leptandria Virginica, *Nutt*). *The root.* This is bitter and nauseous, and yields its virtues to boiling water; acts powerfully as emetic and cathartic, when fresh—not so active when dry. Dose, xx. grs. to ʒ j.

VERBENACEÆ, *Juss.*—(THE VERVAIN TRIBE.)

VERBENA[*] HASTATA, *Linn.*, (Tall Blue Vervain).

V. URTICIFOLIA, *Linn.*, (Common Vervain). A plant held sacred by the ancients, and employed in their religious rites; still worn around the neck for the cure of scrofula. It is bitter to the taste, and has tonic and emetic properties. Its medicinal virtues are not great.

LABIATÆ, *Juss.*—(THE MINT TRIBE.)

MENTHA[†] VIRIDIS, *Linn.*, (Spearmint). M. PIPERITA, *Linn.*, (Peppermint). M. CANADENSIS, *Linn.*, (Canadian Mint). These species of mint are well known remedies as stimulants, in cases of flatulence, gastric debility, etc. The last is the only one indigenous to this country. The two former are grateful aromatic cordials, and used to allay nausea, relieve spasmodic pains of the digestive organs, expel flatus, and correct the taste of nauseating medicines. In fomentation over the stomach, they relieve nausea and vomiting, especially in cholera infantum of young children. In infusion or vol. oil. *Off. U. S. P.*

LYCOPUS[‡] VIRGINICUS, *Linn.*, (Bugle-weed). The whole herb; taste slightly bitter, odor peculiar, virtues imparted to boiling water. A mild astringent, narcotic, and depurative; has been used with success in incipient phthisis, and hemorrhage from the lungs. It lessens the frequency of the pulse, quiets irritation, and allays cough. Infusion best form of using it. (See *N. York Med. & Phys. Jour.* 1, 179.)

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[*] An alteration of the Celtic word *ferfaen*, from *fer* to drive away, and *faen* a stone, in allusion to its medicinal virtues.

[†] From *minthe*, a daughter of Caeytus, who, according to fable, was changed into this plant.

[‡] From the Greek *lykos*, a wolf, and *pous*, foot; its leaves resembling the foot of that animal.

MONARDA[*] DIDYMA, *Linn.*, (Oswego Tea). M. FISTULOSA, *Linn.*, (Horse Mint, Wild Bergamot). M. PUNCTATA, *Linn.*, (Horse Mint). All these species are more or less aromatic and pungent to the taste, and abound in vol. oil, which is separated by distillation. They are carminative and stimulant. The oil forms an excellent stimulating embrocation in rheumatism, flatulent colic, and in cases where such remedies are needed. (See *Phil. Med. Recorder, vol.* 1, *p.* 494.)

PYCNANTHEMUM[†] INCANUM, *Michx.*, (Common Mountain Mint). P. MUTICUM, *Pers.*, (Hairy-leaved Mountain Mint.) P. LANCEOLATUM, *Pursh*, (Virginian Thyme.) We have six species of mountain mint, most of which are used as domestic remedies to answer the same indications as the other species of mint.

ORIGANUM[‡] VULGARE, *Linn.*, (Common Wild Marjorum). This plant has a warm, pungent taste, and a peculiar aromatic odor, which are owing to a volatile oil. It is a stimulant, tonic, diaphoretic, and emmenagogue. The oil forms a good external stimulant as an embrocation in toothache, neuralgia, rheumatism, etc. *Off. U. S. P.*

COLLINSONIA[§] CANADENSIS, *Linn.*, (Common Horse-balm, Stone Root, Knot Root). An indigenous plant, having a strong and disagreeable smell, and a warm pungent taste. Diuretic, diaphoretic, tonic, and astringent. The active principle is volatile, hence the fresh plant is to be preferred. The decoction of the fresh root is highly recommended in cystitis, gravel, leucorrhea, and dropsy, and it is a popular application in the form of fomentation, to ulcers, wounds, and bruises. It is apt to excite nausea and vomiting. The *Shakers* put up the root and sell it under the name of *Stone-root;* it is chiefly employed for diuretic and tonic purposes. The oil or tincture are the best preparations.

CANILA MARIANA, *Linn.*, (Common Ditany). A small indigenous herb, having a pungent taste and agreeable odour, depending on an essential oil. It is a gently stimulating aromatic and diaphoretic; a warm tea of it, like that of the mints, is a popular mode of inducing perspiration, in colds and fevers; to relieve colic, and promote the menstrual flow.

HEDEOMA[||] PULEGIOIDES, *Pers.*, (Pennyroyal). A well known indigenous annual plant, a very pleasant aromatic stimulant, emmenagogue, and diaphoretic; given in warm infusion on going to bed; also in flatulent colic, and sick stomach. The oil is a favorite mode of administration with some. *Off. U. S. P.*

MELISSA[¶] CLINOPODIUM, *Benth.*, (Wild Basil, Field Thyme). M. OFFICINALIS, (Common Balm.) These species contain a small quantity of essential oil of a peculiar flavor; it forms one of the best diaphoretic drinks in febrile complaints, and is very acceptable to the stomach.

SCUTELLARIA[**] LATERIFLORA, *Linn.* (Mad-dog Scull-cap). Has no sensible properties—had a considerable reputation at one time as a preventive of hydrophobia: at present few place any confidence in it as a prophylactic. (See *Barton in Phil. Med. and Phys. Jour.*, vol. 1.)

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[*] In honor of *Monardez*, a Spanish botanist of the 16th century.

[†] From the Greek *pyknos*, dense, and *anthemon*, a flower, the flowers being in clusters.

[‡] From *oros*, mountain, and *ganeas*, joy; because many of the species are fragrant and beautiful, and grow in hilly places.

[§] In honor of *Peter Collinson*, of London, a distinguished patron of botany.

[||] From the Greek *hedys*, sweet, and *osme*, odor.

[¶] From the Greek *melissa*, a bee, because its flowers are much sought after by that insect.

[**] From the Latin *scutella*, a little cup, from the appearance of the calyx.

S. INTEGRIFOLIA, *Linn.* (Entire-leaved Scull-cap. This species is intensely bitter, and possesses decided tonic properties.

NEPETA[*] CATARIA, *Linn.* (Common Catnep, Cat-mint). The whole plant—odor unpleasant, bitter aromatic taste; a useful carminative in diseases of children. It is anodyne and decidedly antispasmodic, hence an excellent remedy in a paroxysm of hysteria—has considerable reputation in the treatment of amenorrhœa and chlorosis; also as an anthelmintic. Given to infants and young children in infusion.

LEONURUS[†] CARDIACA, *Linn.*, (Common Motherwort). Formerly in high repute as a medicine—a gentle, stimulating diaphoretic, and emmenagogue.

MARRUBIUM VULGARE, *Linn*, (Common Horehound). The whole plant is officinal. Stimulant, diuretic and tonic—in large doses laxative; a popular remedy in coughs, colds, and diseases of pulmonary organs, in the form of expressed juice, syrup or candy. We have known severe cases of chronic cough cured by the expressed juice taken in warm new milk.

BORAGINACEÆ, *Juss.*—(THE BORAGE TRIBE.)

PULMONARIA[‡] VIRGINICA, *Linn.*, (Virginian Lungwort). As the species of this plant are emollient and demulcent, and have enjoyed a high reputation in pulmonary diseases, Dr. Griffith thinks they owe their efficacy to a reliance on the doctrine of signatures, the leaves having spots bearing some resemblance to the lungs.—The *virg.* is astringent, and is much used in some parts of the country in coughs and colds, and diseases of respiratory organs.

LITHOSPERMUM[§] OFFICINALE AND ARVENSE, *Linn.*, (Gromwell, Stone-weed). The seeds have a greyish-white, pearly color, and a stony hardness. Formerly much employed as lithontriptic, from the supposed resemblance between the remedy and the complaint. Not used at present.

SYMPHYTUM[||] OFFICINALE, *Linn.*, (Common Comfrey). A highly mucilaginous plant. slightly astringent; it resembles closely the mallow; both contain an acid malate of *Altheine.* (*Jour. de Pharm.*, xiii., 635.) A popular remedy in catarrh, diarrhœa, dysentery, etc.

CYNOGLOSSUM[¶] OFFICINALE, *Linn.*, (HOUND'S TONGUE.)

C. VIRGINICUM, *Linn.*, (Wild Comfrey). These plants have anodyne, demulcent, and astringent properties, and are employed as local applications to scrofulous sores, burns, tumors, sprains, etc. The *Officinale* contains an odorous principle, tannin, and several salts. Dr. Griffith thinks the plant too much neglected. (*Med. Botany*, p. 500.)

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[*] From the Greek *nepa*, a scorpion, the bite of which it was once supposed to cure.

[†] From the Greek *leon*, a lion, and *vara*, a tail, from a fancied resemblance of the plant.

[‡] From the Latin *pulmones*, the lungs; they having been a remedy for diseases of this organ.

[§] From *lithos*, a stone, and *sperma*, seed, which are very hard.

[||] From the Greek *symphyo*, to grow together, in allusion to its healing qualities.

[¶] From the Greek *kyon*, a dog, and *glossa*, a tongue, from the shape of the leaves.

Convolvulus[*] Panduratus, *Linn.*, (Wild Potato Vine). Indigenous; the root very large, 2 or 3 feet in length, about 3 inches thick, branched at bottom, has a somewhat acrid taste. Feebly cathartic, slightly diuretic, and useful in calculous complaints, and strangury; 40 grains of the root purge; might be given in extract. A favorite remedy with some botanic doctors. (*Wood & Bache.*)

Solanaceæ, *Juss.*—(The Night-Shade Tribe.)

Nicotiana[†] Rustica, *Linn.*, (Wild Tobacco). A naturalized plant, probably introduced by the Indians; contains *nicotina*, like common tobacco.

Datura Stramonium, *Linn.*, (Jamestown Weed). A powerful acro-narcotic; the seeds and leaves both contain the active principle *daturia;* a useful article in neuralgia and rheumatism, externally and internally used; also in asthma; it is slightly laxative; used to dilate the pupil. Cataplasms and ointment made of the leaves are also useful preparations, the latter in piles and painful ulcers, etc.

Hyoscyamus[‡] Niger, *Linn.*, (Common Henbane). A powerful narcotic, antispasmodic and anodyne, with laxative properties. Its poisonous effects are owing to an active principle, *hyoscyamia*; our most valuable anodyne, next to opium. Exotic.

Solanum Dulcamara, *Linn.*, (Bitter-sweet, Woody Night-Shade). Supposed to possess deobstruent and alterative properties, very slightly narcotic, not poisonous, also diuretic and diaphoretic; given in decoction.

Solanum Nigrum, *Linn.*, (Common Night-Shade.) A powerful narcotic; poisonous; introduced from Europe.

S. Tuberosum, *Linn.*, (Common Potato). The stalks possess narcotic properties, also the epidermis of the tubers, especially when much exposed to light. A good preventive of scurvy when eaten raw with vinegar; its nutritious properties depend chiefly on starch.

Gentianaceæ, *Juss.*—(The Gentian Tribe.)

Gentiana[§] Soponaria, *Linn.* (Soap Gentian). G. Quinqueflora, *Laur.* Five-flowered Gentian. G. Crinita, Large fringed Gentian. Pure bitter tonics, fully equal to the imported Gentian, (*Lutea*,) and might be substituted for it; stomachic. In a fresh state they prove laxative. We have three other species, equally medicinal.

Frasera[‖] Caroliniensis, *Walt.*, (American Columbo). A good bitter, reported by many as equal to imported Columbo. When recent, it is emetic and cathartic, and operates like rhubarb; when dried, simply tonic. Employed much at the west and south, and kept in the shops. Powder and infusion.

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[*] From the Latin, *convolvo*, to entwine.

[†] From *John Nicot*, who introduced the weed into Europe.

[‡] From *hyos*, a hog, and *cyamos*, a bean, because hogs are said to feed on the fruit, which resembles a bean.

[§] From *Gentius*, a king of Illyria, who brought the plant into use.

[‖] From *John Fraser*, a collector of North American plants.

Erythræa[*] Centaurium, *Pers.*, (Common Centaury). A pure bitter and tonic, no astringency, and slight aroma.

Sabbatia[†] Angularis, *Pursh.*, (American Centaury.) An excellent, pure, bitter tonic, without astringency. Two other species, *Stellaris*, (*Pursh*), and *Chloroides*, (*Pursh*), have the same properties.

Menyanthes[‡] Trifoliata, *Linn.*, (Buckbean, Marsh Trefoil). A good tonic, combining laxative and diuretic properties. In small doses astringent. (See *Wood and Bache.*) Said also to be emmenagogue.

Apocynaceæ. *Juss.*—(The Dogbane Tribe.)

Apocynum[‖] Androsæmifolium, *Linn.*, (Dog's Bane). Contains bitter extractive matter, caoutchouc, and vol. oil. *Root*, diaphoretic and emetic, in full doses causes emesis, without previous nausea, or much muscular relaxation. A stimulant to digestive organs in small doses.

A. Cannabinum, *Linn.* (Indian Hemp). Emeto-cathartic, diuretic, and diaphoretic; produces copious watery evacuations, followed by general perspiration; uncertain as a diuretic, most useful as a hydrogogue in dropsy.

Asclepiadaceæ, *R. Br.*—(The Milk Weed Tribe.)

Asclepias[§] Cornuti, *Decaisne.* (Silk Weed, Milk Weed). Diuretic, diaphoretic, anodyne and expectorant. The young plants resemble asparagus; the dried leaves are employed in preparing the indigo dye in woollen manufactories.

A. Incarnata, *Linn.*, (Swamp Silk Weed). The root, emetic and cathartic, also diaphoretic.

A. Tuberosa, *Linn.*, (Pleurisy Root). Well known from its beautiful orange-colored flowers; a good diaphoretic and expectorant, slightly tonic. In large doses, cathartic. Has been found useful in catarrh, pneumonia, pleurisy and other pectoral complaints; also, in rheumatism and dysentery, in infusion or powder. We have six other species of this genus, all of which possess medicinal properties.

Oleaceæ, *Hoff.*—(The Olive Tribe.)

Ligustrum[¶] Vulgare, *Linn.*, (Common Privet). The *bark* contains a peculiar substance, *ligustrin*, mannite, starch, sugar, extractive, and tannin, bitter resin, etc. The *berries* are black, are cathartic, and used for dyeing. The *leaves* are astringent, as are the flowers; used in aphthous affections of the mouth and fauces as a wash. (*Am. Jour. Phar.*, XII.—347.)

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[*] From the Greek, *erythros*, red, the color of the flowers.

[†] After *L. Sabbati*, an Italian botanist of last century.

[‡] From the Greek *mene*, a month, and *ankros*, a flower, in allusion to its emmenagogue virtues.

[§] From *apo*, from, and *kyon*, a dog, it being thought poisonous to that animal.

[‖] The Greek name of *Æsculapius*, to whom the genus is dedicated.

[¶] From the Latin *liguro*, to tie, from its flexibility.

APELATOUS EXOGENOUS PLANTS.

Aristolochiaceæ, *Juss.*—(The Bitterwort Tribe.)

Aristolochia Serpentaria, *Linn.* (Virg. Snake Root). An invaluable diaphoretic, stimulant and tonic. Contains much volatile oil, and a yellow bitter principle; also, diuretic; particularly adapted to cases of typhus fever, and eruptive diseases where the grade of action is low, and the eruption slow in appearing. In powder, infusion or extract. Off. U. S. P.

Asarum* Canadense, *Linn.*, (Wild Ginger, Canada Snake Root). An aromatic, stimulant, tonic, containing a very fragrant essential oil, etc. Forms a pleasant adjuvant to tonic infusions and decoctions; in powder or tincture.

Chenopodiaceæ, *Vent.*—(The Goosefoot Tribe.)

Ambrina Anthelmintica, *Spach.* (Worm Seed, Jerusalem Oak). A valuable anthelmintic, well adapted to cases of lumbrici in children, in doses of ℈j. to ʒj, followed by oil. The seeds of the A. *Ambrosioides* (Mexican Tea), is sometimes substituted for the true Worm seed, but the seeds have a weaker odor. and are less offensive. The *oil* is a good form of giving it. These plants would probably prove useful in nervous affections. Formerly *Chenopodium.*†

Polygonaceæ, *Juss.*—(The Buckwheat Tribe.)

Polygonum‡ Fagopyrum, *Linn.*, (Buckwheat). Furnishes nutritive seeds, not so nutritive as the cereal grains, containing only half its weight of fecula.

P. Hydropiper, *Linn.*, (Smart Weed). Recommended by Dr. Eberle, and others, as a powerful emmenagogue, in form of saturated tincture; also, stimulant and diuretic. (See Eberle's Practice, 4th ed., v. 1, 441.)

P. Aviculare, *Linn*, (Knot Grass). A mild astringent, formerly employed as a styptic and vulnerary.

We have seventeen species of this genus growing in this state, the leaves of many of which are acrid and pungent, and will vesicate when applied to the skin. They lose this property, however, by drying. The roots of some of these species will probably be found good alteratives. Off. U. S. P.

Rumex Crispus, *Linn.*, (Curled Dock). R. Britannica, *Willd.*, (Yellow-rooted Water Dock). R. Obtusifolius, (Broad-leaved Dock). R. Verticillatus, (Long-stalked Water Dock). These species have similar medicinal properties, which are astringent and mild tonic; also alterative and depurative; useful in all chronic cases where sarsaparilla is usually recommended. The *Britannica* is the *Aquaticus*, or Water-Dock of Willdenow. The *Crispus*, and *Obtusifolius* combine laxative with tonic and astringent properties, like rhubarb. The *Crispus* is very useful in decoction or ointment in the treatment of itch, and other cutaneous diseases. The root forms a good dentifrice when the gums are spongy. Decoction best form of administration. The R. *Acetosella* or *Sheep Sorrel*, contains a large quantity of binoxolate of potash, which renders it agreeably acid. Off. U. S. P.

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* From the Greek, *a* not, and *seria*, a band, because it was rejected from the garlands of flowers employed by the ancients.

† From *chenos*, a goose, and *pous*, foot, the leaves resembling the foot of this bird.

‡ From the Greek, *polys*, many, and *gonu*, joint; the stem having numerous joints.

PHYTOLACCACEÆ *R. Br.*—(THE POKE WEED TRIBE.)

PHYTOLACCA* DECANDRA, *Linn.*, (Poke Weed). An acro-narcotic emetic, and purgative ; as an emetic its operation is very slow, causing much nausea and distress ; in small doses alterative ; *tincture* useful in rheumatism. An ointment made of the leaves, is recommended in psora, tinea-capitis, and other cutaneous diseases. (*Am. Jour. of Pharm.* XV. 169). Off. U. S. P.

LAURACEÆ. *Juss.*—(THE CINNAMON TRIBE.)

SASSAFRAS† OFFICINALE, *Nees.*, (Sassafras). The bark and roots aromatic, stimulant, cordial and diaphoretic, used chiefly as an adjuvant to other preparations. Virtues reside in a *volatile oil* ; has been recommended in chronic rheumatism, cutaneous eruptions, scorbutic and syphiloid affections. In infusion or oil. Off. U. S. P.

BENZOIN ODORIFERUM, *Nees.*, (Fever-bush, Spice-bush). A very agreeable stimulant, diaphoretic and aromatic tonic, a useful vermifuge, and drink in low fevers. The bush is recommended in intermittents. The oil of the berries is used as a stimulant. The berries have been employed in place of allspice. A decoction of the young branches is often used as a medicinal drink for horned cattle, in the spring of the year.

THYMELACEÆ, *Juss.*—(THE MEZEREUM TRIBE.)

DIRCA‡ PALUSTRIS, *Linn.*, (Leather Wood, Moose Wood). Fresh bark vesicates the skin; the berries are emetic and poisonous. The bark forms a good stimulant masticatory in cases of toothache, &c. In decoction it proves expectorant and sudorific, similar to mezereon in its medical properties. Bigelow thinks it might be substituted for Senega.

ULMACEÆ, *Mirbel.*—(THE ELM TRIBE.)

ULMUS AMERICANA, *Linn*, (White Elm, American Elm).—U. FULVA MICHX., (Slippery Elm, Red Elm.)—U. RACEMOSA, (White Elm).—The inner bark of the Fulva forms an elegant demulcent from its abundant mucilage; also nutritious, and forms a good substitute for *Gum Arabic.* Dr. Griffith recommends it as an alterative in cutaneous diseases; good bougies are formed of its bark. Externally applied as poultices and fomentations to inflamed parts.

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* From the Greek *phyton*, a herb, and *lachanon*, pot-herb, in allusion to the use made of the young herbs.

† From the Spanish *salsafras*, saxifrage, whose virtues have been attributed to this plant.

‡ From the Greek, *dirke*, a fountain, the plant growing near water.

CELTIS OCCIDENTALIS, *Linn.*, (Sugar-berry, Nettle Tree). The berries sweetish and somewhat astringent; useful in diarrhœa and dysentery.

EUPHORBIACEÆ. *Juss.*—(THE SPURGE TRIBE.)

EUPHORBIA CORALLATA, *Linn.*, (Flowering Spurge). E. HYPERICIFOLIA, *Linn.*, (Upright Spotted Spurge). E. IPECACUANHA, *Linn.* (Wild Ipecac). These species all furnish an acrid milky juice; all are emetic and cathartic, but too active for general use. In small doses, they are expectorant and diaphoretic. They cause much nausea and distress as emetics, and are apt to irritate and inflame the stomach. Given in infusion, decoction or powder of the root.—(See Wood & Bache.) Seven species are found in the State.

JUGLANDACEÆ, *De Cand.*—(THE WALNUT TREE.)

JUGLANS NIGRA, *Linn.*, (Black Walnut). Bark is acrid and styptic, used chiefly for making ink. The rind of the unripe fruit is used to cure ringworm and tetter; decoction as a vermifuge.

J. CINEREA, *Linn.*, (Butternut). The inner bark is a mild and pleasant cathartic, suited to cases of habitual constipation; recommended in dysentery. Barton thinks it anodyne. In decoction or extract the sap affords a laxative sugar. The fruit is used for pickles. The different species of *Carya*, *Hickory*, of which we have four, are worthy of notice, as their bark is astringent and possesses antispasmodic properties.

CUPULIFERÆ, *Richard.*—(THE NUT TRIBE.)

CORYLUS[*] AMERICANA, *Walt.*, (American Hazlenut). C. ROSTRATA, *Ait.*, (Beaked Hazlenut). The nut of the latter is of an ovate shape, surrounded by a coriaceous involucre, which is round; short and thick bristles, very similar to those of the *Cowhage*. Dr. Heubener, of Bethlehem, Pa., states that these possess similar anthelmintic virtues with the Cowhage, and equal to it in all respects. Given in molasses or syrup.

QUERCUS[†] TINCTORIA, RUBRA, PALUSTRIS, (Pin Oak). ILICIFOLIA, (Bear Oak, Scrub Oak). Q. COCCINEA, (Scarlet Oak). ALBA, (White Oak). BICOLOR, (Swamp White Oak). MONTANA, (Rock Chesnut Oak). PRINOIDES, (Chinquapin Oak), &c. These species, and several others we have not named, (15 in all,) are marked by astringency due to tannin and gallic acid, and have all been employed medicinally. They are all, however, of more use in the arts than in medicine. The *Alba*, (White Oak,) is, perhaps, the most valuable as an internal astringent, and has been used advantageously in hemorrhages, diarrhœa, leucorrhea, gonorrhœa, prolapsus ani, in relaxation of the fauces, and ulcerated throat. Externally, to flabby ulcers, and as a poultice in gangrene and mortification. The *Tinctoria*, (black oak,) contains most tannin and gallic acid; is exported largely for tinctorial purposes, under the name of *Quercitron*. Internally it is more irritating than the former, but preferable for external use, from its greater astringency.—The other species named can be substituted for this and the preceding, or for each other.

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[*] From the Greek, *korys*, a helmet or cap, in allusion to the shape of the involucre.

[†] From the Celtic, *quer*, beautiful, and *cuez*, a tree.

FAGUS* FERRUGINEA, *Ait.*, (Beech). A narcotic principle, called *fagine*, is found in the husks of this species of Beech, and we have but one whose properties have not yet been fully tested.

CASTANEA† VESCA, *Michx.*, (Chesnut). Valuable for its nuts; and bark for tanning, contains gallic acid and tannin.

MYRICACEÆ, *L. C. Richard.*—(THE GALE TRIBE.)

MYRICA‡ CERIFERA, *Linn.*, (Bayberry Wax Myrtle). The fruit furnishes a wax chiefly of that peculiar ingredient of beeswax called *Myricin*, which is obtained by boiling the berries in water, when it separates and is skimmed from the surface; used for candles, and as the basis of a kind of soap; to purify, melt and strain, and cast into cakes; when it is of a pale, greyish green color; consisting of *cerin* 87, and *myricin* 12 per cent. Used in dysentery. The bark of the root is acrid and astringent, and in large doses emetic; a popular remedy in jaundice. (Amer. Jour. Med. Science, 4, 313.)

COMPTONIA|| ASPLENIFOLIA, *Ait.*, (Sweet Fern). A popular remedy in dysentery and diarrhœa; it is tonic and astringent, and possesses a resinous spicy odor.

BETULACEÆ, *L. C. Rich.*—(THE BIRCH TRIBE.)

BETULA§ LENTA, *Linn.*, (Cherry Birch, Black Birch). B. EXCELSA, *Ait.*, (Yellow Birch.) The fruit of these species is remarkable for its aromatic flavor, resembling that of the *Gaultheria Pracumbens;* a tea of it makes a very agreeable diaphoretic stimulating drink. The oil obtained from distilling the bark, is identical with that of the *Gaultheria*, (*Am. Jour. Phar.* xv. 243.) All the species afford a saccharine liqour; we have 6 species of birch.

ALNUS¶ SERRULATA, *Willd.*, (Common Alder). A very useful alterative and astringent, (see *N. York Jour. Med.* vol. 7 & 8.) leaves bitter and astringent; inner bark of root, emetic; a decoction of the leaves has been much used to suppress hemorrhage; very successful in hematuria; the bark has been found useful in intermittents, and the leaves as an external application in wounds and ulcers; also in dyspepsia and bowel complaints; an excellent tonic and alterative; has cured obstinate cutaneous affections, when all other remedies have failed; also scrofula.

SALICACEÆ, *L. C. Rich.*—(THE WILLOW TRIBE.)

SALIX** NIGRA, *Marshall*, (Black Willow). We have 16 known species of Salix in this State, all of which are more or less medicinal, tonic and astringent; most of them contain *Salicine;* the *Nigra*, perhaps,

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* From the Greek *phago*, to eat, because the nuts were used as food.

† From *Castanea*, in Thessaly, celebrated for its chesnut tree.

‡ From the Greek, *myro*, to flow, because found on the banks of rivers.

|| In honor of *Henry Compton*, Bishop of London.

§ From *batu*, the Celtic name for the birch.

¶ From the Celtic words, *al*, rear, and *lau*, the bank of a river.

** From the Celtic, *sal*, near, and *lis*, water, in allusion to the place of growth in greatest quantity. The *Salicine* is valuable as a simple bitter, resembling gentian, but as an antiperiodic, it cannot compare with gentian. Quinine is often adulterated with it. Dose 10 to 30 grains.

POPULUS[*] TREMULOIDES, *Michx.*, (American Aspen). The bark has the same medicinal properties as the Salix, tonic and febrifuge.

P. BALSAMIFERA, *Linn.*, (Balsam Poplar, Tackamahac). Cathartic, and useful in gout and rheumatism. The buds are balsamic and aromatic; the juice is collected and used for diuretic and antiscorbutic purposes. An ointment may be prepared from the buds, which is useful in burns, bruises and tumors.

URTICACEÆ, *De Cand.*—(THE NETTLE TRIBE.)

MORUS[†] RUBRA, *Linn.*, (Red Mulberry). M. ALBA, *Linn.*, (White Mulberry). These species of Mulberry bear edible fruits, which are cooling and laxative: bark, anthelmintic and cathartic. The *Alba* furnishes food for the silk worm, and its root is a good vermifuge. The fruit of both species furnishes a grateful drink in fevers. A syrup of mulberries forms a grateful addition to gargles. The *Rubra* is indigenous, the *Alba* from China.

URTICA[‡] DIOICA, *Linn.*, (Stinging Nettle). U. URENS, *Linn.*, (Small Nettle). The leaves, seeds and roots, diuretic and astringent, formerly much used in jaundice, nephritic complaints, hemorrhages, scurvy, &c., good to excite external irritation in cases of palsy where there is loss of sensation.

CANNABIS SATIVA, *Linn.*, (Common Hemp). There is but one species of this plant, the *Sativa*, the *C. Indica* being a mere variety. It remains to be ascertained whether the American Hemp contains the same intoxicating and narcotic properties with that of India; we are inclined to think it lacks that resinous portion on which its peculiar medicinal virtues depend.

HUMULUS[§] LUPULUS, *Linn.*, (Hop). A well-known tonic and narcotic; owes its properties to a peculiar principle, which resides in the yellow granular matter of the strobiles, called *Lupulin*, diuretic and decidedly antilithic. Lupulin is the best form of internal administration.

CLASS II.—GYMNOSPERMOUS PLANTS.

CONIFERÆ, *Juss.*—(THE PINE TRIBE.)

PINUS[‖] RIGIDA, *Mill.*, (Pitch Pine). P. STROBUS, *Linn.*, (White Pine). P. MITIS, *Michx*, (Yellow Pine.) P. BALSAMEA, *Linn.*, (Balsam Fir, Balm of Gilead Fir). P. CANADENSIS, *Linn.*, (Hemlock Spruce). P. NIGRA, *Ait.*, (Black or Double Spruce). P. ALBA, *Ait.*, (White or Single Spruce). P. PENDULA, *Ait.*, (Tamarack, American Larch). Turpentine and resin are obtained from all the above species in greater or less quantity. The *Rigida* abounds in turpentine; the

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[*] From *populus*, the people, having been used in ancient times as a shade tree for public walks.

[†] From the Greek *moron*, the mulberry.

[‡] From the Latin *uro*, to burn, from its stinging properties.

[§] From *humu*, moist earth, because it prefers damp soils.

[‖] From the Celtic, *pin* or *pen*, a rock or crag; in allusion to its usual locality

Balsamea yields the *Canada Balsam*, which is largely exported for medicinal purposes; 650,000,000 of white pine lumber, (*P. Strobus*,) are supposed to be annually obtained from this State, which require 65,000 acres to produce. The turpentines are all diuretic, stimulant, expectorant; in large doses, purgative and vermifuge. They constitute the best class of alterative remedies in the chronic diseases of old people, and especially of the pulmonary and urinary organs; excellent external applications and revulsives.

Cupressus* Thuyoides, *Linn.*, (White Cedar). An infusion of the tops, stomachic and diuretic.

Thuya Occidentalis, *Linn.*, (Common Arborvita Tree). Stimulant, diuretic, diaphoretic, and vermifuge; decoction of the strobiles is recommended as an astringent in diseases of the bowels.

Juniperus† Virginiana, *Linn.*, (Red Cedar). J. Communis, *Linn.*, (Common Juniper). The first species, *Virginiana*, is probably the J. *Sabina*, (Savine,) of Hooker; the leaves and berries possess the same medicinal properties, which are owing to volatile oil, wax, resin, gum, &c. Both are stimulating diuretics, and decided alteratives in all diseases of mucous membranes; also powerfully emmenagogue and anthelmintic; used as an ointment to promote the discharge from blistered surfaces.

Taxus‡ Canadensis, *Willd*, (American Yew). A resinous tree; the leaves of the European species, *Baccata*, which, according to *Michaux* is identical with the present, are said to act in small doses, like Digitalis in reducing the force of the circulation. We hope trials will be made to test the virtues of this plant. The ancients considered the tree poisonous, especially during the season of flowering.

CLASS III.—ENDOGENOUS, OR MONOCOTYLEDINOUS PLANTS.

Araceæ, *Juss.*—(The Arum Tribe.)

Arisæma Triphyllum, (Indian Turnip). Formerly the *Arum*. The tuber very active when fresh, owing to a volatile, inflammable principle, soluble in water and alcohol. When dry it furnishes a large quantity of nutritious starch, resembling *sago*. When recent, used as a carminative stimulant in flatulent colic, etc. Has some reputation in bronchitis.

Calla Palustris, *Linn.*, (Water Arum). The Rhizomes are acrid and caustic, but on drying, grinding, and washing, furnish a very pure starch, which in the north of Europe is made into palatable bread. Diaphoretic when fresh.

Symplocarpus§ Fætidus, *Salisb.*, (Skunk Cabbage). Root and seeds, narcotic and stimulant; very acrid when fresh, which is lost by drying. Has been used in asthma, rheumatism, dropsy, hysteria, and chronic catarrh; the leaves to keep up a discharge from a blistered surface.

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* From the Island of *Cyprus*, where the tree abounds.

† From the Celtic, *juneprus*, rough or rude, the character of the genus.

‡ From *toxon*. bow, because the wood was used for that purpose by the Greeks.

§ From the Greek, *symploke*, connexion, and *karpos*, fruit, the berries being united.

Acorus* **Calamus**, *Linn.*, (Sweet Flag). A pleasant stimulant, tonic and stomachic. A good adjuvant to bark and quinine in intermittents. Used in flatulent colic and atonic states of digestive organs.

Alismadeæ.—(The Water Plantain Tribe.)

Alisma† **Plantago**, *Linn.*, (Water Plantain). Acrid, and resembling the Ranunculus in its properties. In Russia it is believed to be an antidote in hydrophobia. The Kalmucks use it as food when dried. as it contains much fecula. Recommended in diseases of urinary organs.

Sagittaria‡ **Sagitifolia**, *Linn.*, (Arrow Head). Has a fleshy rhizome, which is used for food by the Indians; abounds in starch; edible even in the fresh state. Sometimes several inches in diameter.

Cypripedium§ **Pubescens**, *Swartz*, (Yellow Lady's Slipper). A very energetic antispasmodic and nervine, nearly equal to Valerian. The root is employed. We have used it in hysteria and other nervous diseases with striking benefit, in the form of powder and infusion. The *Spectabile*, (Showy Lady's Slipper,) and *Acaule*, (Noah's Ark,) have the same properties.

Iridaceæ, *Juss.*—(The Iris Tribe.)

Iris Versicolor, *Linn.*, (Blue Flag). A very certain and mild cathartic; in small doses diuretic, in larger, emetic. As a cathartic, the powdered root is equal to any of our indigenous articles. (See *N. Y. Jour. Med.*, vol. ix.) Fresh root has a sweetish sub-acrid taste, and a faint, disagreeable odor; both nearly dissipated by drying. Take the fresh-dug roots, cut into slices, dry in an oven heated to about 100°, then pulverize, and keep in close-stopped bottles. Dose of powder, as cathartic, 10 to 15 grs. It should be combined with some stimulant, as cayenne, ginger, or myrrh. These prevent nausea and griping. It operates as a mild yet effectual cathartic, producing copious discharges well tinged with bile. An alterative in smaller doses, 2 to 4 grs. Considered by some equal to jalap, and might be substituted for it in some cases.

Smilaceæ, *R. Brown.*—(The Smilax Tribe.)

Trillium‖ **Cernuum**, *Linn.*, (Nodding Three-leaved Night Shade, Birth Root, or Birth-wort). T. **Erectum**, *Linn.*, (False Wake Robin). T. **Grandiflorum**, *Salisb.*, (Large-flowered Trillium). All these species are medicinal, possessing alterative, tonic and astringent virtues. The fresh roots have an aromatic taste, and the odor of turpentine, causing an acrid sensation in the mouth. They are much used in hemorrhagic cases, and with benefit by botanic doctors, and in domestic practice. I found the Indians on Lake Superior (1846) using the root of the *Cernuum* to facilitate child-birth; it is in common use among them for this purpose, as well as for all kinds of discharges in females. This plant deserves farther investigation.

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* From the Greek, *a*, without, and *kore*, the pupil of the eye, having been used for sore eyes.

† From the Celtic, *alis*, water, its place of growth.

‡ From the Latin, *sagitta*, arrow, the shape of the leaf.

§ From the Greek, *Kypris*, Venus, and *podeon*, a shoe—*i. e.*, the slipper of Venus.

‖ From the Latin, *triplix*, triple, most parts of the plant being in threes.

Smilacina Racemosa, *Desf.*, (Wild Spikenard). A mild alterative, diuretic, and diaphoretic.

Polygonatum Multiflorum, (Solomon's Seal). Deobstruent, and slightly astringent. Deserves investigating.

Smilax[*] Rotundifolia, *Linn.*, (Green Briar). S. Hispida, *Muhl.*, (Hispid Green Briar). S. Spinulosa, *Smith*, (Spinulose Green Briar). S. Herbacea, *Linn.*, (Carrion Flower). All these species of Green Briar are believed to possess alterative and diaphoretic properties, and are mentioned for the purpose of directing further attention to them.

Liliaceæ, *Juss.*—(The Lily Tribe.)

Lilium[†] Philadelphicum, *Linn.*, (Red Lily). L. Canadense, *Linn.*, (Wild Yellow Lily). L. Superbum, *Linn.*, (Turk's Cap). The roots, or bulbs, contain much mucilage, are slightly acrid; the active principle is volatile; used in domestic practice in dropsy and to form emollient cataplasms, boiled in milk. An ointment is also prepared from the flowers, which has soothing properties.

Erythronium[‡] Americanum, *Arn.*, (Dog's Tooth Violet). The recent root emetic, in doses of 20 to 30 grs. When cooked, the bulbs are edible. The leaves are more active than the roots. Dr. Bigelow supposes that this plant might supply the place of *Colchicum*. In domestic practice the leaves and roots are used as an application to scrofulous sores, for which purpose they are boiled in milk

Allium[§] Canadense, *Kalm*, (Meadow Garlic). A. Vineale, *Linn.*, (Wild Garlic). A. Tricoccum, *Ait.*, (Wild Leek). A. Cernuum, *Rath.*, (Wild Onion). All contain a volatile, acrid oil, which render the bulbs, in a fresh state, rubefacient and revulsive. Internally they prove expectorant, diuretic, and diaphoretic, like squills. The species *Canadense*, is fully as active as the cultivated garlic, and may be substituted for it. The onion, *A. Cepa*, possesses similar properties, but much milder.

Aletris Farinosa, *Linn.*, (Star Grass, Colic Root, Blazing Star. Ague Root, etc.). The root contains a very bitter resinous principle, soluble in alcohol, slightly in water. Tonic, and stomachic, emetic and cathartic, slightly narcotic. Dose of powder, 10 grs. A popular remedy in colic, dropsy, and rheumatism.

Melanthaceæ, *R. Brown.*—(The Colchicum Tribe.)

Veratrum[‖] Viride, (White Hellebore, Indian Poke). The *root*—this contains *veratria*, in the form of a *super gallate*; *fatty-matter*, containing a volatile acid; *extractive*, and a principle called *jervin*, crystallizable, (*Griffith*). An acid irritant hydragogue cathartic and emetic. In small doses alterative and deobstruent. Useful in gout, rheumatism; and extract, as an ointment, in cutaneous diseases; decoction for destroying vermin, etc.

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[*] From the Greek *smile*, a grater, from its being rough with prickles.

[†] From the Celtic *li*, white, that being the color of one of the principal species.

[‡] From the Greek *erythias*, red, from the spots on the leaves.

[§] From the Celtic word *all*, signifying hot, or acrid.

[‖] From the Latin *vere atrum*, truly black, in allusion to the color of the root.

HELONIUS DIOICA, *Pursh*, (Unicorn Plant). The root, a popular tonic and anthelmintic. The tincture is a good stomachic and alterative.

FILICES, *R. Brown.*—(THE FERN TRIBE!)

POLYPODIUM* VULGARE, *var.* AMERICANUM, *Hook.* (Common Polypody). We have four species of Polypod. possessing slight medicinal properties. The *rhizome*, diuretic and expectorant; when dried, the root is bitter; formerly much used as a purgative in obstructions of the liver. The *P. filix-mas* is not found in the State.

ADIANTUM PEDATUM, *Linn.*, (Maidenhair). Demulcent and pectoral; forms a mild expectorant syrup, (*Capillaire*,) and a vehicle for administering other remedies.

These two species are allied, but easily distinguished. There is no doubt but that both possess the same medicinal properties. The *Aspidium filix-mas* has been mistaken by several other American botanists besides Pursh, but they have mistaken for it the *A. goldianum*, or *A. dilatatum.*

ASPIDIUM GOLDIANUM, *Hook.* (Goldie's Shield Fern). This is the *A. filix-mas* of Pursh, *Polypodium filix-mas* of *Linn.*; it is not found in North America. We have several species of *Lycopodium* possessing medicinal properties, which have not yet been investigated.

Such are some of the articles composing the Materia Medica of the State of New-York; but they by no means embrace all. Under this head might be ranked the various cultivated cereals, the invaluable *Zea*, (Indian corn,) the *Avena*, (oat,) *Triticum*, (wheat,) *Hordeum*, (barley,) *Secale*, (rye). The sugar of the maple has medicinal properties of no little value. The *Fuci*, (sea-weeds,) furnish soda, as well as iodine, in any quantity, a very important article in medicine. Some of this class, as the *Alaria esculenta* of Great Britain, will also be found edible, and mucilaginous, like *Chondrus crispus*. Our *Fungi* have been as yet very imperfectly investigated, but it is well known that we have a considerable number that are wholesome and edible; while a still larger number are poisonous; and we have no means of distinguishing them, except actual experience. Griffith states that the same species may be wholesome or poisonous, according to circumstances. The secale cornutum deserves mention, as an important agent in the list of our materia medica; as do also some of our *lichens*, possessing both alimentary and medicinal properties. It will probably be found that we have some not far inferior in these respects to the *Cetraria islandica*, (Iceland Moss,) or the *Gyrophora proboscidia*, (Tripe de Roche,) of the artic regions. These still remain to be investigated, and furnish a wide field for the cultivators of this department of Medical science.

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* From the Greek, *polys*, many, and *pous*, foot, in allusion to the feet-like branches of the root.

NATURAL ORDERS,

CONTAINING MEDICINAL PLANTS.

		No. of Species
1.	Ranunculaceæ,	38
2.	Magnoliaceæ,	3
3.	Anonaciæ,	1
4.	Berberidacæ,	4
5.	Nympheaceæ,	3
6.	Papavaraceæ,	2
7.	Fumariaceæ,	7
8.	Cruciferæ,	31
9.	Violaceæ,	16
10.	Hypericaceæ,	10
11.	Caryophyllaceæ,	25
12.	Malvaceæ,	8
13.	Linaceæ,	2
14.	Geraniaceæ,	5
15.	Oxalidaceæ,	3
16.	Balsaminaceæ,	1
17.	Anacardiaceæ,	6
18.	Xanthoxylaceæ,	2
19.	Hippocastinaceæ,	1
20.	Celastraceæ,	4
21.	Rhamnaceæ,	4
22.	Vitaceæ,	5
23.	Polygalaceæ,	7
24.	Leguminosæ,	59
25	Rosaceæ,	51
26.	Lythraceæ,	5
27.	Onagraceæ,	24
28.	Saxifragaceæ,	8
29.	Hamamelidaceæ,	1
30.	Umbelliferæ,	30
31.	Araliaceæ,	5
32.	Cabombaceæ,	1
33	Caprifoliaceæ,	24
34.	Compositæ,	160
35.	Rubiaceæ,	13
36.	Valerianaceæ,	2
37.	Lobeliaceæ,	7
38.	Ericaceæ,	42
39.	Aquifoliaceæ,	6
40.	Ebenaceæ,	1
41.	Plantaginaceæ,	6
42.	Plumbaginaceæ,	1
43.	Orobanchaceæ,	3
44.	Bignoniaceæ,	1
45.	Scrophulariaceæ,	38
46.	Verbenaceæ,	5
47.	Labiatæ,	45
48.	Boraginaceæ,	14
49.	Solanaceæ	8
50.	Gentianaceæ,	16
51.	Apocynaceæ	2
52.	Asclepiadaceæ,	10
53.	Oleaceæ,	4
54.	Aristolochiaceæ,	2
55.	Chenopodiaceæ,	17
56.	Polygonaceæ,	22
57.	Phytolaccaceæ,	1
58.	Lauraceæ,	2
59.	Thymelaceæ,	1
60.	Ulmaceæ,	4
61.	Euphorbiaceæ,	8
62.	Juglandiaceæ,	6
63.	Cupuliferæ,	22
64.	Myricaceæ,	3
65.	Betulaceæ,	9
66.	Salicaceæ,	25
67.	Urticaceæ,	10
68.	Coniferæ,	14
69.	Araceæ,	7
70.	Alismaceæ,	7
71.	Iridaceæ.	3
72.	Smilaceæ,	14
73.	Liliaceæ,	12
74.	Melanthaceæ,	10
75.	Filices,	41
	Total,	1020

NATURAL ORDERS,

CONTAINING NON-MEDICINAL PLANTS.

	No. of Species.		No. of Species.
1. Menispermaceæ,	1	28. Amaranthaceæ,	4
2. Nelumbiaceæ,	1	29. Santalaceæ,	2
3. Saraceniaceæ,	1	30. Eleagnaceæ,	1
4. Capparidaceæ,	1	31. Laururaceæ,	1
5. Cistaceæ,	6	32. Cerotophyllaceæ,	1
6. Droseraceæ,	4	33. Callitrichaceæ,	1
7. Elatynaceæ,	1	34. Podostomaceæ,	1
8. Illecibraceæ,	4	35. Empetraceæ,	2
9. Portulaccaceæ,	3	36. Balsamifluæ,	2
10. Tiliaceæ,	1	37. Platanaceæ,	1
11. Limnanthaceæ,	1	38. Linaceæ,	2
12. Aceraceæ,	5	39. Typhaceæ,	4
13. Melastomaceæ,	1	40. Naiadaceæ,	13
14. Cactaceæ,	1	41. Hydrochardaceæ,	3
15. Grossulaceæ,	5	42. Orchidaceæ,	38
16. Cucurbitaceæ,	2	43. Hypoxidaceæ,	1
17. Crassulaceæ,	4	44. Dioscoreaceæ,	1
18. Dipsaceæ,	1	45. Pontederiaceæ,	3
19. Campanulaceæ,	4	46. Juncaceæ,	18
20. Primulaceæ,	11	47. Corumelynaceæ,	2
21. Lentibulaceæ,	2	48 Xyridaceæ,	1
22. Acanthaceæ,	1	49. Eriocaulonaceæ,	1
23. Pedaliaceæ,	1	50. Cyperaceæ,	159
24. Hydrophyllaceæ,	3	51. Gramineæ,	124
25. Polemoniaceæ,	3		
26. Diapensiaceæ,	1	Total,	462
27. Convolvulaceæ,	7		

We thus have SEVENTY-FIVE NATURAL ORDERS, containing medicinal plants, including 1020 species, a part of which only are yet known to possess remedial properties. We have also FIFTY-ONE ORDERS, which include no very active medicinal plants, embracing 462 species. Many of these, however, as the Grass and Cypress tribe, embrace genera of a medicinal character.

ART. II.—*Experiments to prove that the Capillaries of the Lungs do not Anastomose.* By G. P. CAMMANN, M. D.

As it is still a question among anatomists,* whether the Pulmonary Capillaries do or do not Anastomose, the following experiments may not be without their value.

Experiment 1. We injected water colored with gamboge into a branch of the pulmonary artery going to a section of lung, and found that a defined portion became moderately distended with the fluid; the water then commenced flowing from the accompanying bronchus and vein. The latter being secured by ligature, we continued to force in the injection, until this portion of lung became very tense. The injection continued confined to the same original extent of lung; the surrounding parts remained perfectly flaccid, and not a drop of the fluid escaped from any of the bronchi or veins.

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* Reisseissen, Marshall Hall, and others.

Exper. 2. A similar injection was forced into a branch of the pulmonary vein. The fluid flowed only from the accompanying bronchus and artery. (The injection entered with such facility as to show that its course was not interrupted by any valves.)

Exper. 3. We moderately inflated a section of lung through a bronchial tube and secured it by ligature. The accompanying pulmonary artery was then injected, and it was found that the injection extended exactly as far as the inflated portion of lung, following closely the indentations so marked at the boundaries of the bronchial ramifications; the surrounding parts remaining flaccid.

Exper. 4. We substituted the vein for the artery with similar results.

Having, to our entire satisfaction, repeated the above experiments a number of times, we proceeded from the larger arteries and veins to the more minute; gradually approaching the periphery or free border of the lung, and at each advance necessarily including a smaller section. We found in these experiments, as in the former, that the injection of colored water remained confined to the ramifications of the artery or vein under examination, and did not interfere with the neighboring branches. We thus pursued the arteries and veins until they became so minute that it was impossible to insert the finest tube. In other words, we approached so near the terminal branches as to inject only a lobule or a part of a lobule.

To confirm the preceding experiments, and place the matter beyond doubt, we had recourse to another series.

Exper. 5. We injected a moderately-sized pulmonary artery with a strong solution of tartaric acid, and continued to fill the vessel, until from the accompanying bronchus and vein there streamed out a fluid which, when tested with bicarbonate of soda, proved to be the acid.

Exper. 6. Having previously secured by ligature the accompanying bronchus and vein, we injected a branch of the pulmonary artery with the acid solution, until the portion of lung to which it was distributed became distended and tense. We then, in a similar manner, injected an adjoining branch of the artery with a strong solution of the bicarbonate of soda, and applied force almost sufficient to rupture the tissue. The two solutions were apparently in close contact, yet not the least chemical action ensued, although we kept the vessels thus distended until we were apprehensive that the chemicals acting through the tissues might lead into error. Neither in this nor in the former experiment did any liquid come from the neighboring vessels.

Exper. 7. When the two solutions were injected successively into the artery and vein accompanying the same bronchus, the lung was rent in every direction by the disengaged carbonic acid.

Exper. 8. We pursued our investigations from the larger branches of the pulmonary vessels to the more minute, and carried them down as far as practicable.

If anastomosis of the capillaries had existed, the effervescence from the soda and acid would have burst the pulmonary tissues as in experiment 7.

As the preparations from the above experiments were of a perishable nature, we injected sections of lung with mucilage of gum Arabic colored with indigo, and then suspended them in alcohol. The injection passed only to the lobule or lobules to which the vessel was distributed. We possess many of these preparations, in which portions of lung have been injected, the intermediate spaces being entirely free. The surrounding lung remained perfectly flaccid and free from discoloration, even when a degree of force was employed sufficient to rupture the capillaries and form collections of injections either in the substance of the tissue or beneath the pleura. A distinguished pathologist observed this, on submitting sections of the lung to a powerful microscope. So perfectly distinct were the lines of demarcation between the injected and uninjected portion of lung, that we could readily dissect the one from the other, without causing the least escape of fluid. These preparations strikingly illustrate the perfect fidelity with which the experiments had been performed.

In performing these experiments, certain precautions were necessary to ensure success. 1. While cutting off the piece of lung for experiment, care was taken not to draw down the edges, lest the vessels to be injected should be on the apex of a cone, as the terminations of some of the lateral vessels might thus be above the incision. 2. The piece of lung was so held that the colored water flowing from the accompanying bronchus and vein could not run into the neighboring vessels. 3. The surface of the cut lung was wiped so dry that any oozing of fluid could be detected. 4. The injection was passed in very slowly, in order that none of the capillaries or tissues might be ruptured. The liquid was entered rather faster than it flowed from the accompanying vessels. 5. The bronchus and vein were not closed too soon, lest the air, which was, in some cases, forced before the injection, might rupture the capillaries. 6. On approaching as near as possible the periphery of the lung, and after inserting the tube, by compressing with spring-forceps some of the branches of the vessels under examination, a very small portion of a lobule could be injected. 7. In the small lobes of the lungs of the sheep, where the vein runs superficially for an inch or two, it afforded great satisfaction to observe the colored injection as it returned by the vein, and which continued to flow for some time before it escaped from the accompanying bronchus, proving that it must have passed through the capillaries; and if there had been any communication with the neighboring capillaries, they would have become distended. 8. The warmest weather of summer was found to be the best season for making experiments and preparations. At this time of the year the lungs retain their elasticity, whereas they become dry and do not freely accommodate themselves to the injection after being hardened by a reduction of temperature and then subjected to artificial heat.

We have thus ascertained that there is no anastomosis of the capillaries of one branch of an artery or vein, however minute, with the capillaries of any other branch in the pulmonary circulation; or in other words, that the capillaries of each minute branch of an artery or vein are perfectly isolated and independent of any other capillaries for a collateral supply of blood. We hold it, then, as proved, that there is no anastomosis between the capillaries of one lobule with that of another, nor, as far as analogy will warrant, between the capillaries of one minute or terminal artery with those of another. If any additional confirmation were required, it might be furnished by an examination of the preparations, when it could be seen that the interstitial cellular membrane, even of the most minute lobules, remains perfectly free from any discoloration from the injection.

If we allow the structure of the pulmonary blood-vessels to be as it is generally supposed, and the anastomosis of their capillaries to be as intimate as Dr. Marshall Hall and others describe, we would expect that almost every case of profuse hæmoptysis from pulmonary apoplexy, congestion, or any other cause, must necessarily prove fatal,* from the continual action of the lungs pumping, as it were, the blood from the vessels so easily supplied by the very numerous and freely-communicating capillaries, and from the difficulties which would thus be presented to the formation of coagula. Now, we know, on the contrary, that immediate danger is comparatively slight, notwithstanding, as stated by Bichat, and verified by others, that the lungs, especially when inflamed, are more frequently than any other organs, flooded with an immense quantity of blood. Bichat well says, "Voyez le poumon d'un péripneumonique ; en le fendant vous diriez au premier coup d'œil, que ce sont les solides qui y sont augmentés, il a souvent comme l'aspect du foie dans la masse pesante qu'il représente ; mais mettez-le macérer, bientôt tout s'echappera en fluides. Or, examinez comparativement la peau, l'estomac, le foie, les reins, etc., devenus le siége d'une inflammation aiguë qui a fait succomber le sujet ; ils ne présentent rien d'approchant de ce surcroit énorme de fluid dont le poumon inflammé dans sa substance est surchargé." Again ; what prevents the occurrence of exhausting hemorrhage when there are abscesses and excavations in the lungs, surrounded by perfectly healthy structure, without even the intervention of false membrane ? According to Baillie, this is "principally the case when the abscesses are small and placed at a considerable distance from each other." Yet, even then, we would suppose that the blood would be continually forced out into the cavity by the action of the lungs, while the free communication of the capillaries would furnish an ample supply. The preceding remarks are also applicable to an excavation from pulmonary gangrene ; for, as Andral says, "the parietes of this cavity are, in general, not lined by any false membrane ; the pulmonary parenchyma which surrounds it is in some cases perfectly healthy."

In the pathological conditions of the lungs there are appearances which are very peculiar, viz. : the abrupt and perfectly-defined margin that frequently exists between the healthy and diseased parts. These singular boundaries, as if marked out with a pencil, are found in no other organ, except, perhaps, in the brain. In inflammation, or as the effects of inflammation, in other organs, the surrounding tissue is involved ; and as we recede from the point of most active disease, the remote parts are less affected, but there are no lines of demarcation ;—indeed, we can scarcely pronounce where a healthy condition commences, whereas, in very many of the diseases of the lungs, the separation between the morbid and healthy parts is perfectly defined, as has been remarked by every pathologist. Addison says, that, "especially in certain atonic forms of pneumonia, these changes are confined to individual lobules, more or less remote from each other, the common cellular membrane forms a distinct boundary to the inflammation." Grisolle speaks of isolated lobules being the seat of pneumonia; and Andral alludes continually to this disease as being circumscribed. With respect to pulmonary apoplexy, Laennec observes, that "it is always very exactly circumscribed, the induration being as considerable at the point of termination as in the centre. The pulmonary tissue around is quite sound and crepitous." Andral makes the same remark. He also, in his Clin. Méd., has very interesting observations and facts upon the lobular nature of tubercles, but they are too long to be transcribed.

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* We would certainly anticipate such a result, when it is remembered with what facility the injections entered the bronchi.

The experiments of Dr. Marshall Hall on the batrachia, will not apply to warm-blooded animals. In Roget's Animal and Vegetable Physiology, it is beautifully shown how, as we ascend from the lower order in the scale of beings to the most perfectly organized, the pulmonary structure materially varies, so that analogy will not hold good between the different orders of beings. He observes, that in the frog a limited portion only of the blood thrown out from the heart goes to the lungs, so that any inconvenience from intimate communication of the capillaries is prevented; and proceeds to show the perfect and well-developed structure of the lungs of the mammalia. He states, also, that the torpid and cold-blooded reptiles are separated from the mammalia by a very wide interval; for though the former respire air, that air influences but a part of the blood, as the pulmonary is only a branch of the general circulation.

It is allowed by the best anatomists and physiologists, that the capillaries are differently arranged in each organ, being so modified as to accommodate themselves to the tissues through which they ramify. Bichat considers it certain that their distribution and formation differ in the tendons, aponeuroses. muscles, etc.

If we admit that there is no anastomosis between the capillaries of the lungs, we can satisfactorily explain many points in the physiology and pathology of the pulmonary organs. 1. We can easily perceive how, in pulmonary hemorrhage, the arterioles or capillaries, having no collateral supply of blood to instantly rush in and keep them distended, readily contract, and allow the formation of coagula, which effectively prevent excessive loss of blood. 2. We can explain why, in small abscesses where there is not a false membrane between the parietes and healthy structure, there is not a continual flow of blood into the cavity, for as the capillaries discharge themselves they shrink; although in large cavities where, from extent of surface, an exhausting hemorrhage might occur, nature provides a false membrane. 3. We can read understandingly the facts recorded by Bayle, Laennec, Andral, Barth, and indeed by all correct and skilful pathologists. We understand why pulmonary inflammation, congestion, apoplexy, gangrene, etc., are so exactly circumscribed and defined; and why in inflammation we do not, as in other tissues, always observe a gradation in the degree of engorgement, as we recede from the centre of disease. We find the correctness of Andral, when he describes inflammation as attacking isolated points of the pulmonary tissue; and when he speaks of even vesicular pneumonia, of which Grisolle observes, that 'Billiet and Barthez seem to show that this lesion, described by Andral, is only vesicular bronchitis, in which a portion only of the pulmonary vesicles are inflamed and distended with puriform fluid.' We see reasons for

Andral's statement, that "even in those parts where the hepatization seems most perfect, it rarely happens that some small bronchial tube may not be found still permeable to air; and we sometimes find, that when the lobe of a lung which appeared uniformly hepatized throughout, is dried and carefully examined, we can discover some capillary tubes and air-cells which, instead of having their calibre diminished, are very considerably dilated, and are at the same time free from any appearance of congestion." 4. We can understand when we turn to physical signs, why the crepitous râle is so frequently accompanied by the respiratory murmur. We also ascertain why crepitous râle without respiratory murmur, shows very considerable engorgement; and when respiratory murmur is present, much of the lung is still healthy. We likewise advance a step towards an explanation of lobular pneumonia in children, and account for the frequent relapse and only apparent convalescence in pulmonary inflammation, from small lobules and vesicles remaining in a condition of active disease, after all physical and rational signs of functional derangement have disappeared. Finally, we comprehend the cause of the following phenomena observed by Stokes. "I have frequently seen," says he, "all the signs of solidification subside within two days, and have even observed great modifications in the course of a few hours. **** On this subject more extensive observation is wanting."

We have thus demonstrated how, by being composed of an aggregate of isolated portions, the lungs are protected from the extension of disease; and how, but for this safeguard of nature, organs so essential to existence would be more liable to permanent injury, when a portion of their tissue is incapable of performing its functions.

Art. III.—*Some Physiological Evidences of the Curability of Tubercular Consumption.* By Wm. A. McDowell, M. D.

To establish the cure of any internal disorder of doubtful curability, is difficult—doubt as to accuracy in diagnosis of such cases being always admissible. The difficulty is materially increased when the disease in question presents symptoms so similar to those of other curable diseases, as to render mistakes in the diagnosis easily conceivable.

The *symptoms* of consumption, in many cases, are not at all distinguishable from those of several other disorders of the lungs. An assured diagnosis in such cases, therefore, from symptomatology alone, is impossible; and even with the aid of skilful auscultation, the true character sometimes remains in doubt. The ordinary evidences of cures in other diseases are, therefore, inconclusive and unsatisfactory when applied to tubercular consumption; and hence, the futility of reference to experience on the citation of cases cured is manifest. It assuredly would be more rational to question the diagnostic capacity of any practitioner, than to conclude on such evidence, that he had accomplished that which had baffled the skill of ages.

In the following observations, the writer, for the above reasons, will rely in no degree on cases treated, nor upon his personal observations; but, relying only upon the pathological developments made by others, he expects to prove—to the satisfaction of any physician who has kept pace with the progress of modern pathology—that tubercular consumption, from *its nature*, is necessarily a curative disorder.

Tubercular consumption consists essentially in an accumulation of albuminous matter in the tissues of the lungs, in the form of tubercles or tumors.

Chemical analysis of tubercles presents in their composition a remarkably pure specimen of albumen, identical with the albumen of the egg, the albumen of the blood, and with nearly one-half of the organized tissues of the human body—the skin, the vascular, and the cellular tissues being constituted principally from this material. Nor are tubercles restricted in their location to the structures of the lungs, but have been detected, more or less frequently, in every tissue of the human body, and are common to all animals.

The cure of such a disorder must necessarily consist in the removal of the morbid deposit out of the tissues in which it had been lodged, and in changing the morbid condition in the body which caused it to be deposited. This leads to the following inquiries:

First. What is the source of tubercles, and what condition of the solids or fluids of the body is pre-requisite to their origin and growth?

Second. Are tuberculous deposits removable? If so, by what processes?

Third. What are our therapeutical resources for promoting the removal of the tubercles?

First. What is the source of tubercles, and what condition of the solids or fluids of the body is pre-requisite to their origin and growth?

We find in the composition of the blood a large proximate principle, (the albumen,) which is identical, both physically and chemically, with tuberculous matter. This leaves the source of tubercles scarcely questionable; and as we are aware of no growth whatever within the tissues of the body, the nourishment of which physiologists ascribe to any other source than the blood, the *origin* and *growth* of tubercles would seem necessarily attributable to morbid deposition of the albumen of the blood in the solid tissues, by process of effusion, or of secretion.

In the further investigation of this branch of our subject, we must have reference to the various conditions of the blood in health and in disease. In health, the blood, when coagulated, presents the appearance of a little more clot than serum. The clot is composed of two parts, the red globules and the fibrine; the serum is composed of albumen, water, and mineral matters. In diseased conditions, the relative proportions of these constituents are exceedingly variable; the globules being sometimes greatly in excess, and at others exceedingly deficient. The serum, in dropsical cases, has been found so excessive as to render the blood nearly destitute of color: "justifying the common expression," says Andral, "of blood turned to water."* We sometimes find the serum so viscid as to be almost as glutinous as the albumen of an egg, and again, so watery that it might serve to wash and cleanse the fingers; each variation, doubtless, indicating a corresponding morbid condition. But such deviations are often too minute to produce a perceptibly-diseased condition of the body, and hence the difficulty of establishing a standard-healthy composition of the blood. The difficulty consists in finding a perfectly healthy subject. Such subject, Mr. Abernethy is said to have declared to his class, was not to be found in the city of London! and hence nearly all the chemists, who have analyzed what they considered healthy blood, present somewhat different results. Of these various results, the following is an average, from some of the highest authorities on the subject:

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* Andral's Morbid Anatomy.

In 1000 parts of healthy blood, the dry clot is composed of

Fibrine,	3
Globules,	127
The serum is composed of	
Albumen,	68
Water,	790
Saline matters,	12
	1000

The fibrine is recognized to be chemically identical with the albumen of the blood; or, in other words, is a portion of the serous albumen, which, by having become more perfectly organized, is susceptible of spontaneous coagulation. One hundred and twenty-five parts (of the 127 the nuclei) of the globules are solid albumen; the other two (the capsules) are chiefly peroxide of iron. Hence it is manifest, that the actual is much greater than the apparent proportion of albumen, and that the simple principles of the blood are almost exclusively albumen, water, and mineral ingredients.

The diseased conditions in which the globules are found to be most excessive, are apoplexy and scurvy—dropsy and tubercular consumption exhibit its most serous condition.

In the three first-named diseases, apoplexy, scurvy, and dropsy, the tendency of effusion of the excessive ingredient is matter of general notoriety and common observation. Whether this is merely in accordance with the ordinary laws of chemical affinity, in which the abstraction or excess of one ingredient is sometimes observed to cause the separation of another; or, is in consequence of an effort of nature to restore an equilibrium in the blood, by ejecting the excessive ingredient, (its unnatural proportion having rendered it an irritant instead of a healthy stimulant,) is not material to the present inquiry. The fact that effusion does occur, and that the effused matter is that ingredient which pathologists have constantly found to be in excess, only, is important.

In apoplexy, every observer has constantly found globules to be greatly in excess, and fibrine deficient. In seven cases examined by M. Andral, this excess was discovered in them all. "In one of them, the proportion of fibrine had fallen to 1-9th, while that of the globules had risen as high as 175. A few days after, the symptoms were more favorable, and a second venesection was practised." Fibrine was now 3, globules 137.*

In scurvy, the blood has been found, according to the best authorities on the subject,† to contain the greatest known excess of globules and a deficiency of albumen, often not containing a sufficiency of this to cement the globules into a clot, but presenting a dark, loose, flabby mass. In this disease, we have effusions of red blood globules from the gums, nose, lungs, etc., and also into the cellular tissues of the body, exhibiting large black and greenish blotches under the skin, upon the extremities, and sometimes upon various other parts of the body.

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* Andral on changes of the blood in hemorrhage.

† Messrs. Eltie and Allen, surgeons to Lord Anson on his celebrated expedition. Thomas, Eberle, M. Monde, MM. Andral and Gavarret.

"M. Gavarret and I," says Andral, "have ascertained, that the blood of scorbutic patients, whose skin was covered with large ecchymoses, had not more than a third part of the natural quantity of fibrine; and we have found that the natural tendency to hemorrhages is just in proportion to the amount of the deficiency of this element in the blood."*

In dropsy, the blood is sometimes so excessively serous as to be nearly destitute of color, justifying the common expression of "watery blood," "blood turned into water," etc. The effusion of water into the tissues and cavities of the body constitutes this disease.

In consumption, the blood is constantly observed to be too serous; excessive in fibrine, and deficient in globules; this deficiency is, indeed, discoverable in the pallid face. Whether or not this serous blood abounds in any but the fibrinous portions of the albumen, we have not the assurance of the high authority above quoted; but we have this and other equally good authority for the valuable fact that the condition of the blood in this disorder is precisely the reverse of its condition in scurvy.

None of the most distinguished pathologists of the day, in their examinations of the blood, seem to have given any special attention to the condition of the albumen of the serum; but all concur in the important representation, *that in consumption the globules are deficient and the fibrine excessive, and that in scurvy exactly the reverse of this occurs.* The researches of MM. Andral and Gavarret show, that in consumption the fibrine is always abnormally increased, while the globules are as constantly diminished, and that these disproportions keep pace with the progress and intensity of the disease. "In phthisis," says M. Mounnet, "when tubercles are crude, the increase of fibrine is scarcely appreciable; when they begin to soften, it is more marked; at length, when vomica are formed, the proportion of this element sometimes rises to 6 parts in the 1000. The red globules, on the other hand, follow the very opposite direction; their decrease is progressive from the commencement to the close of the disease—the difference often exceeds twenty parts."

These and other authorities touch upon no other portion of the albumen but the fibrine, that part of it which has become susceptible of spontaneous coagulation, and which chemical analysis has shown to differ in no other respect but this from the albumen of the serum, nor when in the blood-vessels do they manifest any physical difference, being equally fluid. The fact that albumen of the serum is frequently in excess in the blood, the best authorities fully attest; but the diseased condition of the body in which this was remarked, none of the most distinguished have adverted to.

The question now arises, whether the *effusion* of the excessive constituent, in cases of apoplexy, scurvy and dropsy, warrants the hypothesis of an analogous albuminous effusion, in cases of excess of *this constituent.* In support of this hypothesis, we have the following analysis, exhibiting the chemical identity of tuberculous matter with the albumen of the blood.

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* Andral's Epistle to Prof. Forgit.

In the result of the analysis of tubercle, chemists differ as to the proportions of the constituent ingredients, as well as in those of the blood. Hecht's analysis of tubercle exhibits nearly equal parts of albumen, fibrine,* and gelatine—in other words, two-thirds albumen.

Thenard's analysis about 98 per cent. albumen, and 2 per cent. of calcareous matter.

The average would be something like the following :

Albumen,	82 per cent.
Gelatine, mucous extractive matter, etc.	16
Calcareous matter,	2
	100

Dr. Marcet's analysis of serum of the blood exhibits in 1000 parts,

Water,	900·00
Albumen,	86·00
Muriates of potash and soda,	6·60
Mucous extractive matter,	4·00
Sub-carbonate of soda,	1·65
Sulphate of potash,	0·35
Earthy Phosphates,	0·60

Which, deprived of its 900 parts water, exhibits of solid matter,

Albumen,	86 per cent.
Mucous extractive matter,	4
Saline matters,	10
	100

This shows that the analysis of the solid parts of serum differ much less essentially from that of tubercle, than different analyses of blood, or even of serum itself, often do from each other.

Here, then, we find a natural source for tuberculous matter, which pervades every part of the body, and is common to all animals. And reference being had to the analogy of other more familiar diseases, the inference is strong that the origin and growth of tubercles are the result either of effusion or of secretion of albumen into the solid tissues ; and that consumption, like dropsy, is of serous origin ; consumption being the result of a degeneration and effusion, or morbid secretion, of one constituent of the serum, dropsy of the other—the one the result of an albuminous, the other of an aqueous effusion.

Either of these effusions, the aqueous or the albuminous, jointly or separately, and either in the form of dropsy or tubercles, may occur under various bodily diseases, and even without appreciable disorder of any of the solid tissues or organs, showing in such cases the disease to be solely consequent on the condition of the fluids. Experimentalists have produced dropsy in healthy animals, simply by gradual and continued injections of water into their veins. The surcharge presently comes to be effused into the tissues of the body to the production of a general dropsy.

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* Hecht's analysis preceded the discovery of the chemical identity of fibrine and albumen of the serum.

Dropsical effusion rarely consists of water alone, but is generally in combination with an ingredient susceptible of coagulation, thereby manifesting the presence of albumen. Water and albumen being effused together, the water being the more easily absorbed, the albumen is liable to be left in a solid form in the tissues; the very condition in which we actually find incipient tubercle. And the appearance frequently presented in recent depositions of tuberculous matter, indicates this very process. Gerhard, upon the subject of tuberculous infiltration, says, "In other cases, the tissue affected is infiltrated with a greyish semi-transparent liquid, which does not at first reveal its peculiar structure, little by little this disappears, and is gradually absorbed as the quantity of the new substance increases." In this, too, we recognize the "gelatiniform tuberculous infiltration" of Laennec, who recognizes it in many cases as the primitive state of tuberculous formations. Tuberculous nuclei thus originating, the manner of their growth or aggregation may be referred either to ordinary laws of affinity, by which particles attract and appropriate others that are similar, or to continued infiltration under the continued influence of the primary cause of the disorder.

This hypothesis is strengthened by the following facts, which any practitioner may readily test.

1st. The sputa from a vomica, when boiled or poured into boiling water, coagulates into a mass, not distinguishable (except when very putrid) from so much boiled albumen of an egg.

2d. When a scrofulous tumor of the neck has softened, if it be freely opened and all the tuberculous matter squeezed out, it will speedily heal up soundly, provided the diathesis which caused the disease be, in the mean time, changed by appropriate treatment; otherwise it will remain open, and every two, three or four days, its whole inner surface will be found encrusted with a layer of pure, solid, tuberculous matter, an encrustation of which, from one-eighth to one-fourth of an inch thick, may, in some cases, be detached with a probe, two or three times a week. The discharge during this time consists of colorless water, the albumen adhering with some tenacity to the fleshy surface of the abscess. The first indication of healing in such an ulcer, is the secretion of pus. At whatever point yellow creamy matter is seen, healthy granulations will also be discovered; suppuration gradually extending, supersedes the albuminous deposit, and presently covers the whole surface of the ulcer, which then speedily fills up and cicatrices. The healing process in the lungs, in this disease, is probably the same; and if so, the purulent expectoration, which so much alarms many physicians, who suppose it to indicate ulceration, should rather be looked upon as the harbinger of healing.

We will here take occasion to say, for the benefit of physicians who have not been observant of the progress of pathology, that the tubercles of the neck and of the lungs are both physically and chemically identical; exhibiting diseases which differ only in locality. We, therefore, with persons of albuminous diathesis, have only this difference, that in one case there occurs an effusion of albumen into the lungs, producing pulmonary consumption; in another, into the abdominal viscera, to the production of tabes-mesenterica or negro-consumption; in another, into the tissues of the neck, producing scrofula or king's-evil, etc., all once reckoned different diseases, now known to arise from the same constitutional bias—and they require the same general treatment.

We now proceed to the second inquiry.

Second. Are tuberculous deposits removable? If so, by what processes?

Modern pathologists generally concur in dividing tubercular consumption into two stages, having reference to the only well-marked change which occurs in the progress of the disease. The first extending from the incipient formation of tubercles to their maturity. The second from the commencement of their putrefaction,* (softening,) to the termination of the disease.

We know of no physiological process by which solid tubercles, or, in other words, tubercles in the first stage of consumption, can be removed from the tissues of the lungs, but absorption. In the second stage, for the removal of softened tubercle, we have the additional processes of ulceration and expectoration.

Whether the foregoing pathology of consumption be admissible or not, we have, at all events, positive assurance that the tubercles which constitute the disorder are albuminous, and that they generally present a very pure specimen of this material.

The removal of tubercles in the first stage of consumption, then, and indeed, the *curability of the disease,* rests mainly on the decision of the question,

CAN ALBUMEN BE ABSORBED?

We have the best possible evidence that albumen can be and is being absorbed during every moment of man's existence. All physiologists agree that the lymph is wholly made up of matters *absorbed* from the tissues of the body; and this fluid, according to M. Chevreueil's analysis, is composed in 1000 parts, of

Water,	926·4
Fibrine, (coagulable albumen,)	4·2
Albumen,	61·0
Muriate of soda,	6·1
Carbonate of soda,	1·8
Phosphate of lime, Phosphate of magnesia, Carbonate of lime,	0·5
	1000·0

Now, if we deduct the water of solution, there remains about 89 per cent. albumen, and 11 per cent. mineral matter, showing a larger proportion of albumen in this recently-absorbed matter than is found either in serum or tubercle. With all unprejudiced minds it might be assumed, that the above question is herein satisfactorily answered; for, if lymph is made up wholly of absorbed matters, and its solid materials correspond almost identically with those of tubercle, the conclusion would seem irresistible, that tubercles themselves can be absorbed. But the pathologists of our day, whose labors have developed the real nature of tubercles, still adhere to the old treatment, and still seem possessed with all the horrors our predecessors entertained with regard to them. A decent respect, therefore, to the opinions of the past, and a proper regard for the prejudices of the present, require that our answer be more fully developed.

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* In process of softening, the fluid matter is almost always first detected at or about the centre of the tubercle, the organization of which, if organized at all, is too imperfect to justify the assumption of its arrival there by process of secretion.

The fact has been heretofore adverted to, that the tubercles which occur in the neck, are identical with those in the lungs. M. Louis informs us, that he has never, in his post-mortem examinations, and they have been vast, found tubercles in the neck, without also finding them in the lungs of the same subject; so that he has come to consider tubercles in the neck pathognomic of tubercles in the lungs. In post-mortem examinations of 349 consumptive adults, he detected tubercles in the necks of one-tenth of them.

M. Lombard, physician to the "Hopital des Enfans Malades," at Paris, on indiscriminate post-mortem examination of all who died at the institution, discovered tubercles in three-fourths of all those who died between four and five years of age, this being the most consumptive period of human life. In his dissection of one hundred young tuberculous subjects, he found tubercles in the lungs of *seventy-three*, in the neck of *seven.* Now, if three-fourths of the children who die between four and five years of age have tubercles, and the proportion of tubercles in the lungs to those in the neck is the same in living children, (viz, as seventy-three is to seven,) and, if in subsequent years we are even proximately as liable to tubercular diseases as in the fourth, it would seem to follow, that but a small portion of the human family passes through life, or even arrives at maturity, without having undergone some tubercular affection of the lungs. Spontaneous recoveries or cures by appetency in dieting, must, therefore, in early life, be of frequent occurrence. It is remarkable what numbers of children we see with tubercles in the neck, from whom they disappear without treatment! No observant physician, during twelve months' full practice, can have failed to observe this frequently. But the reliable post-mortem examinations above referred to, force upon us the conclusion, that the proportion of those who have tubercles in the neck, to those who have them in the lungs, must be reckoned as only about one to ten; and since universal observation attests the removal of tubercles from the neck, or other superficial situations, by process of absorption, it is certainly legitimate to infer their removal from the lungs and other concealed positions, by the same process. This inference is greatly strengthened by the fact, that the lungs are more abundantly furnished with absorbent apparatus than the neck or any other portion of the body. Such, indeed, is the abundance of absorbent vessels here, that they give the surface of the lungs the appearance of being completely silvered over. Besides, the vicissitudes of temperature, the various diseases to which the lungs are subject, and the secretions of which they are the organs, produce much more frequent necessity for energetic absorbent action here, than in the tissues of the neck; and if here, as in other parts of the body, the functional powers are adapted to the exigencies to which the organs are respectively subjected, absorption must be at least as vigorous in the lungs as in the neck, or other parts of the body. Above all, we have the positive evidence of the absorbent activity of these vessels in the speedy removal of aqueous effusions, sloughs, and effusions of blood, in cases of wounds of the chest.

The question still remains, whether tubercles can be absorbed prior to softening, and this may be easily disposed of. We certainly do very often see them removed from superficial situations, without exhibiting any *appearance* of this change; and the fact that other solids, natural, morbid and foreign, animal, mineral and vegetable, organized and unorganized, have been known to be absorbed, compels us to answer this question affirmatively.*

On the arrival of the second stage of consumption, which is marked by softening (putrefaction) of tubercles, in addition to absorption, we have removal by ulceration and expectoration. This addition is far from being desirable, for, together with the sound albumen, a greater or less portion of the softened putrid matter is liable to be absorbed, producing hectic fever and sweats, prostrating the system and weakening or destroying the recuperative powers. Yet, even in this stage, we have conclusive evidence that cures have been effected; many reliable pathologists report post-mortem observations of escars and healed caverns, (which bore intrinsic evidence of their tuberculous origin,) in the lungs of persons who died of other diseases. In some cases they applied these observations to persons whose pulmonary disorders had been treated by themselves many years before, and who then presented all the symptoms and physical signs of having tubercles and tuberculous caverns, and who had been completely restored to health. These persons dying from other diseases, or having been killed by accident, some years afterwards, have presented these healed caverns in the very part of the lungs in which the physical signs had formerly indicated their locality.

In cures in this stage of the disorder, the softened tubercles, it is presumed, are removed chiefly by expectoration, the sound ones by absorption.

We now come to the third inquiry.

Third. What are our therapeutical resources for promoting the removal of tubercles?

The analysis of tubercle renders it evident, that the origin of tuberculous affections is to be looked for in the blood. The degeneration of the blood in these diseases, we have shown to consist essentially in a comparative excess of fibrine—that is, albumen—and a corresponding deficiency of red globules. The change required, therefore, is the restoration of this blood to its healthy proportions, and in order the more effectually to promote removal, and prevent re-accumulation of tubercles, the production of an opposite diathesis.

We have the evidence of all pathologists who have treated this subject, that when these two principles of the blood, the fibrine and the globules, vary, it is always in opposite directions, that is, when the fibrine has been found in excess, the globules have been found deficient, and *vice versa;* and we have the concurrent testimony of many able chemists, that the nuclei of the globules, amounting to about 98 per cent. of their volume, are solid albumen, and that the remaining 2 per cent. is chiefly peroxide of iron, in the form of capsules to the albuminous nuclei. The red globules exist nowhere in the body but in the blood-vessels, consequently they must of necessity be elaborated there, and the materials out of which they are elaborated must pre-exist there, and their analysis shows that at least 98 per cent. of this newly-elaborated compound is at the expense of the albumen,* thus reducing the albumen almost in proportion to the increase of the globules. The result is a deficiency of albumen, and a consequent demand for this ingredient in the nutritive function, calculated to cause its absorption from every available part of the body accessible to the absorbents.

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* See Hunter on the Blood.

Our most reliable therapeutical resources for effecting the required removal of tubercles must, therefore, consist mainly of such articles as best promote the transformation of albumen of the blood into red globules, and of these it is believed the following are most efficient :

First, IRON. Every preparation of iron has been found efficient in increasing the red globules, and in reddening the complexion ; and as iron constitutes the principal ingredient of the globule capsule, the presence of a due portion of it in the blood, it would seem, is essential to the transformation of albumen into red globules. Nor are we without important testimonials of the efficacy of this agent in the prevention and removal of tubercles, from which we select the following :

"M. Costen has submitted several animals to various processes, for the purpose of determining how far the formation of tubercles may be prevented by diet, but principally by the administration of medicines with their food. Some rabbits were fed in the open air, and in the usual manner ; another set were shut up in narrow boxes in a moist, cold place, and deprived of light, air, etc. ; they were fed on potatoes, turnips, etc. ; a third set were placed in the same circumstances as the latter, and nourished in the same way, but they were given every second day some bread containing nine grains of carbonate of iron. The animals were killed after the lapse of five months. The first set were healthy; the second set had tubercles in the lungs, or other parts of the body ; while the third set remained completely free from any trace of tubercle. M. Costen informs us that he has performed similar experiments on dogs, chickens, etc., and invariably found that the bread containing iron prevented the formation of tubercles."†

Second, ALCOHOL. Alcohol, and alcoholic beverages, possess a well-known efficacy in the production of red globules ; and are not without testimonials of their salutary efficiency in tubercular diseases. A prescription, however, somewhat dangerous !

Third, NAPTHA OF WOOD. ' The use of this article strengthens the appetite, improves the digestion, and manifestly increases the globules, and is recommended in the treatment of consumption, with an exaggeration, it is feared, usually incident to new remedies.

Fourth, IODINE. This article is productive of similar effects with the above, and is of well-known efficacy in promoting absorption. It is highly commended by M. Lugol, and others, in tubercular diseases.

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* It may be that it is out of the fibrinous (the most highly-organized portion of the albumen) that the globules' nuclei are by preference elaborated ; this is of no practical importance.

† Provincial Medical and Surgical Journal.

Fifth, ANIMAL FOOD. It is matter of common observation, that persons who subsist chiefly on animal food are more ruddy and athletic, and are more vigorous both in body and mind, than those who subsist on vegetable or lighter diet; and, that the diseases to which they have greatest tendency, are gout and apoplexy. Nor are we without good authority, that fresh meat used alone, in military garrisons, has occasionally produced scurvy, the disease of all others in which the blood has been uniformly found most excessively globulous. Aldrovandi has found that beasts and birds of prey, especially the hawk, are subject to gouty concretions; and it is well-known that carnivorous animals are less subject to tubercles than herbivorous. The native Hindoos, who subsist almost exclusively on vegetable aliment, many of them entertaining religious scruples which preclude the use of animal food, are in the proportion of thirteen to one more consumptive than resident Europeans.*

Consumption is scarcely known among the Indians of North America, who subsist almost entirely on animal food; while among their civilized white neighbors, who enjoy the same climate and are less exposed to the vicissitudes and inclemency of the weather, it is the cause of from one-sixth to one-fifth of all the deaths that occur.

Sixth, COMMON SALT. This is probably the most efficient article of the Materia Medica in treatment of tubercular disorders. It is to an excessive use of this that scurvy is generally ascribed; but as we have better evidence of the origin of this disease from the combination of salt and meat, we shall treat of it as the result of a too free use of salt meat diet.

Scurvy is characterized by an excessively-globulous condition of the blood and deficiency of fibrine, and by morbid absorption of solid albuminous tissues of the body *into* the blood vessels.† These characteristics are exactly the opposite of those of consumption, they being excess of fibrine in the blood and deficiency of globules, and a morbid effusion of albumen *out* of the blood-vessels into the solid tissues of the body.

Scurvy is caused, in most cases, by living too exclusively on salt-meat diet; and is cured by resort to succulent vegetables, acid fruits, etc.

Consumption is caused by insufficiently-nutritive or too diluent and succulent a diet; by such diet, in fact, as cures scurvy; and we trust to be able to show that it may be *cured* by such diet as *causes* scurvy.

To cure consumption, it is necessary to remove the tuberculous deposits from the lungs. To effect this, we know of but two processes—first, expectoration; second, absorption.

To the process by expectoration it is pre-requisite that the tubercles should putrify (soften) into a vomica, and ulcerate a passage into a bronchial tube. In this stage of consumption the lungs usually contain tubercles in every stage of their progression, from their incipiency to their maturity, decline, and putrefaction. The ulceration, together with the absorption of putrid matter, in this process of removal, is productive of the hectic fever, sweats, diarrhœas, etc., that characterize the last stage of consumption, and which, if continued long enough to remove any considerable accumulation of tubercles, but few constitutions could bear; and even in cases of recovery, with lungs so mutilated by caverns and escars impervious to air, all the cicatrized portions functionally destroyed, existence would be scarcely desirable.

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* See Marshall's Medical Topography of Ceylon.

† The albuminous tissues, the skin, the vascular and the cellular tissues, are absorbed in scurvy in preference to the muscular flesh.

Removal of tubercles by absorption produces but little derangement of the structures in which they had been lodged, as may be observed by examination of the tissues of the neck from which they have been removed by this process; and, if absorbed prior to putrefaction, the process causes no material functional disturbance in the system—it is but returning a natural constituent to its original source. This method, then, is in every way to be preferred.

Long sea voyages have in all ages been observed to cure consumption, and to invigorate weakly travellers; and voyages thus curative are as constantly reported to be productive of scurvy in the stoutest sailors. Cures thus accomplished, on persons we have met with, seemed evidently to have been effected by absorption. These persons have concurred in the representation that the earliest symptoms of amendment were diminution of the cough and expectoration. In many of the published cases, too, we find those changes reported as the first indications of improvement. This must necessarily have been otherwise had the removal been effected by expectoration. Some of the subjects we have met with had tubercles in the neck as well as in the lungs; these, too, they reported to have disappeared along with the pulmonary symptoms, and without ulceration.

We are, moreover, aware, that the scurvy which occurs on such voyages is productive of excessive absorption, not only of tubercles, wens, and other adventitious structures, which are observed always to be first acted upon, but also of the natural structures of the body. Such absorption, when occurring, is observed, first, to affect newly-formed structures; and as it progresses, escars and callus are removed, and wounds which had been healed up for fifty years, are opened as if newly inflicted, and broken bones that have been long knit, are disunited;* then follows the absorption of original tissues; and of these, the first and principal are, the albumen, the skin, the vascular, and the cellular, etc., in which great ulceration is observed, before there is much disturbance of the muscular flesh.

But tubercle, when absorbed, is conveyed by the lymphatics back into the blood whence it had been ejected; which process, if no change in the condition of the blood has been effected in the interim, places it in the same condition which created the original necessity for albuminous effusion. The requisite change to prevent this can be effected by no processes, familiar to physiology, but those of *excretion* or *transformation.* Process by transformation fully accounts for all the changes which pathologists have observed; for, in whatever manner or by whatever means a globule is generated, its nucleus, amounting to about 98 per cent. of the entire globule, is produced at the expense and to the reduction of the albumen. This accounts for the fact noticed by all observers, that these elements, when deviating from their healthy proportions, always deviate in opposite directions. Nor is the process of transformation less familiar to physiology than that of excretion. It is by transformation that blood is converted into bone, muscle, and tendon, and these, after a while, into lymph, which is again transformed into blood. Yet none of these transformations occur, unless the ingredients of the transformation are contained in the transforming laboratory.

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* See Lord Anson's Voyages.

Modern chemists have detected in the composition of the blood, the existence of the principles of every tissue and secretion of the body; and experimentalists have ascertained, that if an animal is fed on a diet deficient in a requisite principle, an arrest of development occurs in the part to which it is essential. A hen, for instance, deprived of lime, or other matter containing it, in time will lay eggs without shells. This is strikingly analogous to the formation of globules, etc. If food is not supplied containing a sufficiency of iron for the formation of the globule capsules, the albumen becomes excessive in the blood, in consequence of the supply derived from the chyle and lymph. If, on the other hand, the food contains an excess of feruginous matter, a transformation ensues productive of deficiency of albumen and excess of globules; so that there exists a perpetual liability to one or the other of these morbid conditions. The *modus operandi* of the production of globules by alcohol, animal food, salt, etc., is less comprehensible than that by iron; though the fact is equally evident. But, however effected, the transformation is always to the amount of about 98 per cent. of the new compound at the expense of the albumen, and is, therefore, corrective of the albuminous degeneration, and curative of consumption.

If such change should rather be attributed to excretion, even then, transformation of albumen into water would be pre-requisite to its excretion by the skin and kidneys; as difficult an elaboration, perhaps, as into globules; for, excretion of *albumen*, in this way, is altogether too rare an occurrence to account for the frequency of these changes; and, moreover, this would leave the simultaneous increase of the globules unaccounted for and unaccountable. Globules are elaborated only in the blood-vessels, consequently all the materials for the new compound must pre-exist in the blood.

Let us now take a cursory view of the other side of this subject, and give a little attention to the philosophy of the cure of scurvy. For the cure of scurvy, acid fruits are found most efficacious—the class hesperidium especially—lemons, sour oranges, limes, etc., are considered specific. Chemistry develops the fact, that the citric acid of these fruits produces, in combination with iron, a perfectly soluble compound. This acid entering into the blood, then, and combining with the globule capsules, would convert the insoluble peroxide into the citrate of iron, which is perfectly soluble in water, in which condition it is capable of being thrown out of the body by perspiratory excretion; thereby divesting the albuminous nuclei of their red coats, and leaving them in the condition of free albumen in the blood. Thus at once diminishing the proportion of globules and increasing that of albumen. These fruits, by the way, may be found as beneficial in apoplexy as in scurvy.

Inhabitants of tropical climates seem to have become as familiar with the bad effects of these fruits in consumption as of their benefit in scurvy. We have been informed by consumptives who have resorted to Cuba, that they have been repeatedly warned of this by the natives. If the hesperidium do produce the albuminous degeneration, I can conceive no more rational manner of accounting for the fact than the above; for albumen does not abound in these fruits.

By process analogous to the above, Dr. Ure has succeeded in correcting the calcareous degeneration. By the use of benzoic acid he effected the transformation of the uric acid in the blood into the hippuric; to the production of a soluble in the place of an insoluble salt; a hippurate in place of an urate.

We have dwelt the longer upon this branch of our subject, because, in ascribing these sea-voyage cures of consumption to the supercession of the scorbutic diathesis, we are sustained, as far as we are aware, by none of the standard authorities. We, therefore, deem it advisable to sustain the hypothesis, to the best of our ability, by all the facts within our reach. Whether what we have adduced be convincing or not, it certainly cannot be much less satisfactory than most of the authorities above referred to, most of which concur in ascribing those sea-cures to "inhalation of the pure sea air, and the salubrious exercise of sailing;" and under the same circumstances, sometimes with reference to the same voyage, attribute the accession of scurvy to "bad air, bad food, and want of exercise."

It by no means invalidates our hypothesis, that many consumptives, within the past and present century, have been put upon voyages which have proved utterly fruitless. Physicians, through ignorance or negligence of the true curative principle of *long* sea voyages, have vainly attempted to effect the necessary results, by requiring their patients to perform a succession of short voyages—such as from Liverpool to Venice, to and fro, and around and about the Mediterranean—and have even preferred such voyages, on account of the facilities of procuring what they supposed to be suitable provisions, vegetables, fruits, etc. Now, if our theory be correct, that which was considered recommendatory of these short voyages, namely, the facilities of procuring vegetables and fruits, constitutes the very cause of their failure. Yet, we do not contend for the absolute necessity of *long* voyages, nor indeed of any voyages whatever, since the salt-meat diet, which produces the scorbutic diathesis, is quite as attainable on land and quite as efficacious as at sea—the only difference consisting in the difficulty which sometimes occurs, in getting patients to adhere to the prescribed diet on land, whereas, on long voyages, they have no alternative. On many accounts, indeed, home is to be preferred. In cases of disordered or weak condition of the digestive organs, for instance, salt-meat diet manifestly cannot be borne; and at sea, where there is no alternative patients in such condition speedily die off. It is proverbial of consumptives who go to sea, that they either die soon, or recover their health. On land, many of these fatal cases might gradually be brought to bear the diet and treatment requisite to their restoration.

Scurvy has, in all ages, been of frequent occurrence in besieged garrisons, whenever the besieged have been for sometime without supply of vegetables. We also have the assurance of creditable medical record, that scurvy "was endemic two centuries ago in all the North of Europe," and that it gradually became less common as agriculture and horticulture improved. Huxham speaks of it in England, in his time. He remarks that it was common with fishermen and tradesmen, and seldom met with in agricultural laborers, who drank cider and ate vegetables and fruits. All the writers of these times refer to the latter part of winter and the early part of spring, as the seasons in which scurvy prevailed most; in this we recognize the periods in which salt-meats are the most extensively and vegetables the least used. English history, of this period, informs us that the people attended but little to agriculture, their attention being almost exclusively devoted to grazing. They fattened their cattle and sheep on grass in the summer, and in autumn killed and salted away their year's supply of meat; and this, it would seem, was subsequently eaten almost or wholly without vegetables. "It was not," says Hume, "till the end of this reign, (Henry VIII.,) that any salads, or other edible roots, were produced in England. The little of these vegetables that was used, was formerly imported from Holland and Flanders. Queen Catherine, when she wanted a salad, was obliged to despatch a messenger there on purpose."

In this state of affairs, it is evident that the fare throughout the country must have been nearly of the same character as sea-store diet. While such were the habits of the English people, scurvy was their scourge, and consumption but little complained of. Even at a much later period, we have the high authority of Sir Gilbert Blane, that scurvy prevailed most fatally, especially among the maritime portion of the population; amongst whom he estimated it to have been productive of greater mortality than all other diseases, including maritime accidents and the horrors of warfare. During this whole scorbutic reign, consumption is not noticed as a prominent disease. Yet, among the same people, who have only so far changed their habits of living, as to esteem succulent vegetables as essential articles of diet, and to use fresh instead of salted meats, scurvy has now become little else but matter of history, whilst consumption has become a scourge—the cause of one-fourth of the deaths that occur in the three kingdoms.*

The preceding are the only articles of well-established efficacy in changing the albuminous diathesis. But it would appear from the premises, that whatever tends to increase the blood globules, produces the requisite change, and is to be considered (in like degree) curative of consumption. Other articles of value will, in time, doubtless be added, which, if not equally efficient, may be better adapted to some stages and conditions of the disorder than any of the above. These articles, though concurrent in increasing the globules, seem to accomplish this result through, or accompanied with, different impressions on the system, and by a choice among them, regulated by more extended observation and better judgment in adapting them severally to the peculiarities that may exist in different cases, important improvements may be anticipated in treatment.

The new diathesis which is produced by alcoholic beverages or animal food, generally tends to gout or apoplexy; that by salt, or more especially salt-meat, to scurvy. The first two are grievous and dangerous disorders, and difficult to control. The third presents the advantages of being more easily produced, more active in eradicating the albuminous degeneration, and of being perfectly manageable and destitute of danger.

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* See Clark on Consumption.

For the production of scurvy, salt is recognized as the most energetic article; but the best established agent for its production is salt and meat in combination; and it probably matters but little whether the salt be added in cookery or imbibed by the meat in process of curing.

Iron increases the globules more slowly than salt and more rapidly than alcohol, but not in any known case to an equal excess with either; nor does it seem to produce a tendency to any bodily disorder, the change effected by this article being, perhaps, more a natural than a morbid process.

For these articles, consumptive persons, generally, have an instinctive appetency, especially in childhood. An avidity for strong drink, an appetite for gross diet, and such an avidity for iron as to scrape the rust off of old bars and hoops to eat it, are often exhibited. Good housewives, who use copperas in dyeing, are often alarmed at the appetency evinced for it by their children. When iron is prescribed to be taken two or three times a day, tuberculous children are often found demanding their dose in anticipation of the time. The appetency for common salt is equally remarkable, and even more common. When such appetency is very strong, especially in children, it may often suffice simply to prescribe removal of restraint, and rest the cure on the indulgence of the appetite. A marked deficiency of such appetency presents an unfavorable prognosis.

It scarcely need be remarked to intelligent and educated physicians, that it is not in every case, nor at all times in a majority of cases, that the treatment here suggested can be borne. Cases of the disorder, originating from inveterate irritable ulcerated or dyspeptic conditions of the alimentary canal and digestive organs, are sometimes placed without the pale of treatment, which is of necessity conducted essentially through the chylopœtic viscera; wherefore, unless these be first restored to a suitable condition, we can accomplish nothing; such restoration is sometimes impracticable. In other cases, we encounter the consumptive at so advanced a period, that we have not time for the accomplishment of the necessary results. The presence, too, of tubercles in the lungs, renders these organs peculiarly liable to catarrhal and other irritable and inflammatory attacks. These, if at all considerable, render the prosecution of so stimulant and tonic a treatment inadmissible during the continuance of such complications. So, also, with regard to the occurrence of inflammatory irritation or morbid secretory action in the alimentary canal, or of any considerable degree of fever, hectic or other. All these require suspension of treatment until they subside or are subdued by their appropriate treatment, and the practitioner's success will be very much in proportion to his skill in discriminating and early detecting such complications. Other medical articles may be used advantageously in co-operation with the above, neither should suitable exercises and external appliances be neglected; but a detailed notice of these would extend this article to an unsuitable length.

The writer of this, in his treatment of consumption, during the period of nearly thirty years, has practised the tonic and stimulant portion of the above-recommended treatment with some success. Through a considerable part of the early period of this time, it was his custom to let blood on nearly every occurrence of hæmoptysis; and in such blood the deficiency of globules and the excess of serum were constantly observable. Upon amendment of the patients, it was also observable, that the increase of the globules, evinced in the heightened complexion and the cherry-color of the lips, furnished the earliest indications of convalescence; and in several cases of the restored, tendency to apoplexy was afterwards manifested. These observations led to a comparison of the conditions of the blood in the two diseases, and in every instance it presented as marked a difference as is exhibited in the aspects of the subjects of the respective disorders. This induced the conclusion, that the value of the treatment was to be estimated in proportion to its efficacy in increasing the proportion of globules in the blood, and that every article found to be decidedly productive of this result, might be advantageously added to our therapeutical resources.

It was only within the last fifteen years, that an opportunity occurred for the observation of the blood in a case of well-marked scurvy, and to his surprise it abounded more in globules than any he had ever beheld. Here, he conceived, he saw a solution to the mystery of those sea-cures which had long perplexed him. The observation was followed up by immediate and vigilant research, in the prosecution of which, he had the gratification to find his own observations confirmed by various British naval surgeons, as well as other writers who had examined the condition of the blood in this disorder. This confirmation was productive of vigilant inquiry into the causes of scurvy, in quest of further means for treatment of consumption, which, together with a knowledge of the physical signs required at about the same time, eventuated in greatly-increased success. But it is only within the last five years, that, with the aid of the late unrivalled progress in pathology, he has been enabled to systematize his views satisfactorily, with regard to the pathology and treatment of tubercular disorders. Cures, accomplished previously, were effected, he knew not why nor wherefore.

In the foregoing essay, the writer has restricted himself to facts and inferences drawn from developments of none but the highest pathological authorities, abstaining as much as possible from any reference to his own observations. Availing himself of his own observations, he might have added, that in incipient cases of consumption, there exists an excess in the proportion of the albumen of the serum,* whilst in advanced cases, this becomes variable, and in some cases, is even below the healthy proportion—a deficiency which is probably attributable to the copious effusion and expectoration of albumen that occurs in such cases. He claims, therefore, only the merit of having here brought together and compared the pathological developments of various eminent men, and of having made some original deductions therefrom.

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* The knowledge that blood-letting rapidly reduces the blood-globules, has very much restricted my analysis of consumptive blood. A condition, however, occasionally occurs in which moderate blood-letting may be practised to advantage. No physician should, in such case, neglect to analyze. Fiquier's process for this is so simple, that any one may accomplish it. He discovered that admixture of a neutral salt prevented the globules from passing through filtering paper. His process is as follows: 1st. Separate the fibrine by switching with small rods, in the usual way. 2d. Add to one part of the defibrinated blood, two parts of a solution of sulphate of soda, of the specific gravity of 1·130. On filtering this, the globules will remain on the surface of the filtering paper. 3d. The albumen is separated by coagulating by application of heat. Dry and weigh these ingredients separately. 4th. The proportion of water is determined by the loss sustained on evaporating to dryness a portion of blood previously weighed.

ART. IV.—*Epidemic Dysentery.* By JAMES BRYAN, M.D., Lecturer on Surgery, late Professor of Surgery and Medical Jurisprudence in the Academy of Medicine, Vermont. Also formerly Physician and Surgeon to the Philadelphia Dispensary, etc.

> Quod ad anni tempora, sequidem hyems sicca et aquilonia fuerit, ver autem pluviosum est australe, state necesse et febres acutas crisi, ophthalmias, et *dysenterias*, maxime autem butem mulieribus et viris natura humidis.—*Aph. Hippoc.*, sec. iii.–ii.

THE winter of 1846—7 in Philadelphia was certainly "sicca et aquilonia," dry and cold, particularly the latter part of it, and acute inflammations were of course common during the greater part of the winter. The spring was "pluviosum" or wet, and was also cold and late ; and so far does not correspond with the description of the father of medicine. A large amount of rain fell during the months of March, April and May, with what is generally understood as a "raw atmosphere." Not until June did the thermometer rise sufficiently to make it comfortable without good fires in our houses.

The latter part of June, however, became suddenly warm ; and in the beginning of July, the heat became intense, alternating with heavy showers of rain. From the middle of July to about the 10th of August, the weather was most oppressive, and remarkable for the suddenness with which, on several occasions, the thermometer fell in a few hours at one time to the extent of forty degrees between the evening and the following morning. The change was most uncomfortable. On one day the heated air appeared as if issuing from a furnace, and the next morning winter clothing was necessary. The cold continued for three or four days, gradually giving way, until the thermometer rose again to the point (more than one hundred) to which it had risen before. Large numbers of children and old persons died suddenly during this time.

The Dysentery commenced in May, and has continued to the present time, 20th of August. The last case I was called to, was a lady about eight months gone in gestation ; the disease is yielding very rapidly to the calomel, ipecacuanha and opium treatment, with starch and laudanum injections.

The severest cases occurred about the middle of July, and the mildest are those seen now.

The following cases are presented as examples of the disease and its treatment, as observed by myself. As usual, in the language of Dr. Rush, the epidemic influence has induced most other diseases "to wear its livery." Perhaps the most serious attendant and follower of the disease was engorgements of the brain and inflammation of its membranes. This was particularly the case about the middle of July, when the heat was greatest and most oppressive. The mortality among children, at that time, was much greater than has been usual at the same season of the year; many of them dying of diseases of the brain and its membranes.

In many instances, in adults, the disease (Dysentery) was accompanied with general jaundice, and sallowness of the skin. The attack was often sudden, during a meal, or in the midst of conversation, or after drinking water; the latter would be instantly expelled from the stomach, and the vomiting and nausea would continue long after the discharges per anum had commenced. Almost every one suffered from a feeling of nausea, a disposition to costiveness, or a diarrhœa; generally the latter following on the heels of the constipation. A diarrhœa commenced, changed to a Dysentery in a few hours. The symptoms could not be attributed altogether to the heat of the weather, or the use of unripe fruit; (the latter, we believe very unjustly, stands as the scape-goat for all bowel affections during the summer months;) because they commenced long before the thermometer had attained a high range, and two whole months before the fruits of the season appeared in our markets.

I had not an opportunity of making many post-obit examinations. In one case, which occurred in the practice of three of our most eminent practitioners, I found pretty extensive ulcerations in small spots over the lower part of the colon and throughout the rectum; they were not, however, deep; the mucous membrane seems alone to have suffered, appearing as if nibbled by some insect. It was also softened and thickened.

General bleeding, as far as my experience and that of a number of my medical friends extended, was not found necessary. Leeches and blisters, particularly the latter, produced very happy effects. In some cases the starch and laudanum clysters, with the exhibition of calomel and opium *per orem*, met the indications, and were successful. In most of my cases I found the "Hope's Mixture," or a modification of it, entirely successful. The use in the early stages of mass. hydrarg. in three grain pills at night, in conjunction with the acid treatment, was found very effectual in checking the bilious vomiting and nausea, as well as changing the bitter taste in the mouth. Small quantities of ice, allowed to melt in the mouth, were the best means of relieving the thirst, which, in most cases, was very urgent. I did not find the combinations of ipecacuanha, opium and calomel, so successful this season as formerly in dysenteric affections.

The disease was confined to no age, color, or condition in life. My own observation, however, induced me to believe that the black did not suffer as much as the white portion of our population.

Case 1st.—On the 15th of June, I was called to visit Miss A., aged nine years, with a severe Dysentery, the sixth day of the disease. I commenced the treatment with the use of the acetate of lead and opium, with starch and laudanum clysters. This proving ineffectual, I tried the hydrargyrum cum cretâ et opii, in conjunction with mucilaginous and opiate injections. On the tenth day, I commenced, on the recommendation of my friend, Dr. S. G. Morton, who consulted with me in the case, the use of the following mixture :—

℞ Acid nitric, gtt. iv.
Aquæ camph., f ℥ iv.
Tinct. opii, gttt. lx. M.

Take a tea-spoonful every hour, and use the starch and morphia injections. This treatment, with the use of a mild nutritious and unirritating diet, was continued up to the fourteenth day, when the symptoms had so far abated, that she was directed to use a mild cold infusion of Prunus Virginianus bark. The convalescence was slow but regular; and in about three weeks, with the use of the above infusion, and two or three other tonics, she was able to go out of the city to the country.

The following case, though not strictly *indigenous* to our city, is given as exhibiting, in an aggravated form, the symptoms of the disease as imported from Mexico, where it is known to have been very prevalent and fatal among the men of our army.

Case 2d.—On the 19th of July, I was requested to see Capt. G. D., who has suffered with chronic Dysentery, more or less, during the last four months. He has just returned from New-Orleans, between which place and Vera Cruz, Tampico, Metamoras, and other Southern ports, he has been engaged in his profession for the last ten months. On leaving this city, ten months ago, he was a fine, healthy, robust man. He is now very much emaciated; sallow, and scarcely able to walk or stand upon his feet. He has from twenty to thirty stools per diem, consisting of blood, mucus, and pus. Has very little appetite, continual and urgent thirst, with great tenderness of the abdomen, particularly in the epigastric region, continued jactitation and insomnia. The pulse is quick, small and frequent. Suffers very much from nausea and unpleasant tastes in his mouth and throat, with occasional vomiting of bilious and other matters, especially after drinking water, or other fluids. Is a perfectly temperate man.

I commenced the treatment by prescribing the following:

℞ Acid nitric. gtt. iv.
Aquæ camph.. f ℥ iv.
Aquæ morph., f ℥ ss. M.

Take a tea-spoonful every two hours, and to take in the evening one three-grain pill of mass. hydrarg.

20th. Eleven o'clock, a. m. No stool to-day up to this time. The number of passages during the night much diminished. This freedom from stools, he says, has not occurred before, since the commencement of the disease; feels generally better.

21st. Number of stools increased, and pain returned both at stool and in the intervals. To take a clyster of thin flour starch with a tea-spoonful of the liquor morphia, and repeat during the day.

22d. Passed a bad night. Vomited several times, the stools have increased very much in frequency, the pain is greater with great debility: to take the following:

℞ Spts. nit. dulc., f ℥ ss.
Aquæ puræ, f ℥ iij.
Acid nitric, gtt. iij.
Liquor morph., f ℥ ss.
Sacch. alb, ʒ i.

M. To take two tea-spoonfuls every two hours, alternating with the following:

℞ Protochlorid. hydrarg., gr. vj.
Pulv. opii., gr. iij.

M. dividend. in chartul., No. xii., taking one every two hours. Emplast. cantharid., 5 by 5 inches, applied to the hypogastric region. to remain six hours. Small lumps of ice to be allowed to dissolve in the mouth as a drink diet, boiled milk well salted.

Ditto, 5 o'clock, p. m. Blister smarts very much, is very red and discharges freely. Patient lies upon his back; stools but two, since nine o'clock this morning. To apply bread and water poultice to blister, and to take at nine o'clock this evening two tea-spoonfuls of the liquor morphiæ, with the view of producing sleep.

23d. Nine o'clock, a. m., has had but two passages since five o'clock yesterday; tongue more furred, particularly in the centre. The blistered surface discharges freely. The pain in different parts of the abdomen is much less, but the blister is very sore and painful. Continue medicines, and to take some weak mutton soup, with a small quantity of rice in it.

Ditto, 5 o'clock, p. m. Only three stools during the day; no pain, no blood in the discharges. Patient remains on his back, on account of the blister. Continue medicines and diet; the soup agrees well with the stomach. Had a refreshing sleep from ten to two o'clock; this, with one hour's sleep obtained last night, is the first he has had for a long time.

24th. One stool during last night; taken a pint of boiled milk this morning. One stool this morning; slept very well last night, without morphia. The blister healing slowly. No pain.

25th. No stools last night, but one this morning, and that nearly natural and without pain or blood. Slept well, has taken "tea and toast" for breakfast, is able to sit up and shave himself. Continue acid mixture.

26th. Appears convalescent: to take camomile tea, and continue acid mixture in half the former doses. The patient continued to improve, the appetite increased, and the digestive organs became strong and healthy.

Case 3d. On the 28th of July I was called to visit Mr. T., a young man twenty-five years of age, a house-painter. Had suffered during the last five days with occasional pains in the abdomen; with nausea and diarrhœa, the discharges tinged with blood. He had taken some medicine once or twice, with partial relief. This afternoon he was seized with intense pain in the bowels and excessive vomiting. Several painful anal discharges mixed with blood. When I saw him, I found him tossing about on his bed in great pain. Every now and then vomiting freely, cold skin and sweat; small pulse, thirst, with pain in the head, and generally through the bones. The tongue was covered with a thick fur, dark in the centre. I directed a pediluvium of warm water and mustard, a large sinapism to the abdomen, and twenty grains of calomel to be administered in molasses. The dose to be repeated at the end of three hours. The thirst to be allayed by pieces of ice allowed to melt on the tongue. Cold applications to the head.

29th. The brother called early this morning, and informed me that my patient had had no vomiting after the first dose of calomel, the latter appearing to act as an anodyne. Had passed a comfortable night, slept well, and, in fact, was met in the street this morning considering himself well. I directed him to take a dose of oleum ricini. The cure was complete. Two other cases in the same house, on the same occasion, were treated in this way with like results.

Case 4th.—I was requested to visit a patient in West Philadelphia, Mr. D., a strong laboring man, who had had Dysentery for five days. On the first day he sent to Mr. B., a popular drug vender, for "medicine for the Dysentery." Some astringent mixtures were sent, the use of which checked, in three days, the discharges; left the tongue furred, the pulse quick, the skin dry, the stomach irritable, and a continual *hiccough*, which was very distressing to the patient, and alarming to his friends. The hiccough had existed two days when I was called, accompanied with great difficulty in swallowing fluids. I prescribed twenty grains of calomel, to be repeated at the end of three hours. Meeting my friend, Dr. S. Jackson, of Northumberland, I mentioned the case to him, and he concurred with me in thinking the case somewhat dangerous, and recommended, if the prescription already made did not relieve the patient in 24 hours, the use of blue pill to salivation.

2d day.—The hiccough was moderated for a short time by the calomel, it having induced great sickness of stomach, and pretty free vomiting of bilious matter, which relieved the patient considerably for a short time. The second dose did the same thing to a less extent. Still, however, the hiccough continued. I directed a three-grain pill of blue mass to be taken every two hours, and a tea-spoonful of Hoffman's Anodyne every three hours; to take mutton soup and boiled milk well salted as a diet.

3d day.—The hiccough has nearly subsided, each dose of the anodyne relieves it; the bowels have been moved once, the appetite has improved, the stomach retains both soup and milk.

4th day.—The hiccough ceased at twelve o'clock last night; two passages per anum without pain or blood; strength improving, general condition much better; continue pills. This patient gradually recovered, but not until the gums were "touched." The convalescence was slow, but sure.

In this case, I considered that the stomach and liver had become, to a certain extent, paralyzed; very much as in the case of the confirmed drunkard, or in the latter stages of typhoid fever; and therefore prescribed the calomel in large doses, with the view of rousing them from their torpid condition. The use of the blue mass was of course designed to keep up the impression and continue the action; the favorable termination of the disease would seem to justify this view of the case.

September 1st.—In conversation with my medical acquaintances, and by my own practice, I find the bowel diseases above described have generally given place, at this early day, to autumnal fevers, generally of a bilious type. This is the case in the city proper, and more especially in the suburbs, and along the water-courses. The banks of the Schuylkill are lined with cases of bilious fevers, some of them very severe. The weather is close and sultry, with almost daily thunder showers, followed by a hot sun, which fills the air with terrene vapors impregnated with the gases thrown off from dead and decaying vegetable matter.

Art. V.—*Puncture of the Femoral Artery, treated by Compression, with some Remarks upon that Method.* By Dewitt C. Enos, M. D., New York.

Stephen Merritt, Jr., æt. 14, while engaged in whittling, August 1st, 1846, stuck his knife into his left thigh, and punctured the femoral artery in its middle third. The hemorrhage was profuse, yet he crossed the street, and walked nearly half a block, to get to an apothecary's, where I found him, perhaps three or four minutes after the accident occurred. He was lying upon his back, on the floor, in the midst of a large quantity of bright arterial blood. He was pale and exsanguinated, yet the blood was gushing *per saltum* from the wound. This was immediately stopped by pressing, with my thumb, the femoral artery against the ramus of the pubis. The loss of blood had been so great, that, although the day was very warm, he could not endure the slightest current of air. Two methods of treatment at once suggested themselves, viz: the ancient one by ligature, and the modern one by compression. In consultation with Dr. Whitaker, who saw the case with me, it was resolved to try the latter. Accordingly, a tourniquet was placed upon the thigh, as near the groin as possible, and a compress was screwed down upon the artery, sufficiently tight to control the hemorrhage. The wound was then brought together by adhesive strips, and a compress placed over it, to guard against the occurrence of a false aneurism. The whole limb was then enveloped in a bandage, from the toes to the instrument, to prevent venous congestion. The patient was then put upon a cot, and the recumbent position was enjoined. Re-action soon set in, and I left him comfortable.

2d. Had slept well through the night. Tourniquet was loosened, and moved a little farther down. 3d. Was quite feverish. Took a gentle cathartic. He complained of his leg feeling numb. The bandage was removed, the limb rubbed, and it was re-applied. The point of compression was changed again. 4th. Had slept well. Was quite feverish and restless in the afternoon. He took ice. Leg was again re-dressed. Did not feel so numb. It thus went on well. The instrument was moved up and down on the thigh, as often as its continuance in one place became painful. At the end of two weeks, the instrument and bandage were removed, and the limb was perfectly well, except that he complained of numbness, which gradually yielded to friction, and the cold douche.

On reviewing the case, several queries naturally arise. 1st. Is it certain that the femoral artery was punctured? 2d. If so, how great was the wound in it? 3d. Did the treatment cause an obliteration of the artery? 4th. Does compression promise to be the best method of treatment in such cases?

1st. With regard to the first query, as to whether the femoral artery was punctured in this case, or not, I think it can be unhesitatingly answered in the affirmative, and for the following reasons. The hemorrhage was profuse, and therefore came from some large blood-vessel. 2d. The blood was of a bright-red color,. and came jetting from the wound at every pulsation of the heart; therefore it came from an artery;—hence, as the wound was in the middle third of the thigh, it came from the femoral, or from some large branch of it,—but the only branches of the femoral, in its middle third, are the muscular, the largest of which is too small to have afforded the copious hemorrhage. That it could not have come from the profunda, or its branches, is clear, because they go to the limb posteriorly, and are there distributed; whereas the wound was upon the anterior and inner aspect of the thigh. It was directly over the course of the femoral artery, being in a line drawn from a point midway between the anterior superior spinous process of the ilium and the symphysis pubis to the inner condyle of the femor. Hence the only inference that is left us is, (unless there chanced to have been some abnormal distribution,) that the knife penetrated the femoral artery.

2d. How large was the wound in the vessel? As the knife was small and pointed, and as it was thrust in nearly perpendicularly, I am inclined to think, that perhaps not more than a third of the circumference of the artery was divided.

3d. The first thought in reference to the third question naturally is, that the artery must have been obliterated; but I am confident that this was not the case. I did not attempt to accomplish it. The effort of the surgeons who first tried to make compression supersede the Hunterian operation for the cure of Aneurism, was to produce obliteration of the artery, by pressing the opposite surfaces of the vessel so firmly together as to cause inflammation, and adhesion between them. To carry out the theory, (and theory always influences the practice of rational men,) patients were subjected to *severe* and *continued* pressure. The circulation must be stopped in the artery, or else the adhesive effusion would be washed away by the passing current, and the opposite sides of the vessel must be kept in close and continued contact, or this adhesion could not take place. The consequence was, as might have been anticipated, that the tortured patient would, unbidden, remove the clamps and screws from his limb to obtain relief. Hence the frequent failure of the early attempts at compression. The very rigor with which those surgeons applied this treatment, was the source of their disappointment and chagrin. Here we see the value of an enlightened pathology, and its influence in the treatment of disease; for no sooner had Mr. Freer of Birmingham, in 1806, showed that pressure upon an artery caused an effusion of lymph, not within the artery, but in the cellular tissue around it, and between its coats, by which the calibre of the vessel was diminished, than the key was given to the successful application of compression to the cure of Aneurism. It was no longer necessary to keep up severe and continued compression; but gentle and occasionally-interrupted pressure, though too light to completely close the vessel, yet enough to check the force of the circulation, was found sufficient to cause an effusion of fibrin around the artery, beneath the point of compression, and to favor the coagulation of blood within the aneurismal sac. The cases of aneurism that have been cured by this system of treatment, are almost as numerous as the cases in which it has been intelligently and perseveringly applied.

In this case of puncture, I kept the patient *recumbent*, that the gravitating effect of the column of blood above the wound might be avoided. To counteract the action of the heart, I then made a moderate degree of pressure upon the artery, and maintained it at some point for twelve days. The force of the circulation was thus effectually controlled, and the effused fibrin and blood in the wound became coagulated; the passing current being too insignificant to retard the process, or to force the coagulum away. This coagulum finally became organized, the wound and divided coats became united, and the artery remained pervious and entire. The artery, then, was not obliterated, but its calibre was diminished.

4th. That is the best method of treatment which is most conservative of life. It requires more care to treat a case by compression, than it does by ligature. A ligature is soon applied, and unless secondary hemorrhage occur, it gives no farther trouble. The surgeon, too, frequently gets more credit for its application, than for all the care and skill required in the treatment by compression. Hence, he is strongly tempted to apply the ligature. But I am satisfied, that where compression can be applied, and carefully attended to, for the cure of Aneurism, and arterial hemorrhage, that it is much the safer method. It cannot be denied, but that secondary hemorrhage frequently follows the application of the ligature. The surgeon is thus required to repeat, and re-repeat the operation, till he has driven the artery beyond the reach of the boldest hand, and then he is forced to the painful necessity of seeing his patient, without any hope of relief, expire before him. This is no fancy sketch. Alas! that there are so many veritable examples of its truth! I have now in my mind, one that occurred about the same time as this case of puncture. The tibial artery of an apparently healthy young man was wounded: the surgeon applied a ligature to the femoral, secondary hemorrhage followed, and the artery was tied farther up; again it was followed by hemorrhage, and the external iliac was secured; but again did the hemorrhage come on, and the patient expired.

A resort to compression amplifies our resources. Hence, it is more conservative of life.

If we at first apply the ligature, it is the only treatment we can adopt; for should it fail, the opportunity of then resorting to compression is rare. Whereas, should we first apply compression, and should it be found to fail, we can then resort to the ligature, as readily as at first. But the success which attends compression rarely makes it necessary. That which is complained of most by patients and surgeons, is the pain that compression gives. Dupuytren, after he had cured two cases of popliteal Aneurism by compression, and had failed in two, concluded that there are individuals who cannot bear compression; whilst there are others who endure it without inconvenience. But I am satisfied that cases of the former are rare, where the compression is *moderately, variedly* and *interruptedly* applied, according as the circumstances may require. I doubt whether the four cases of failure, spoken of by Boyer, would all have proved to be such, had the compression been thus applied. Much depends upon the ingenuity and contrivance of the surgeon, in successfully applying and varying this treatment. If compression be resorted to, and carried out according to the pathological indications I have adopted, and according as the varied circumstances may demand, I believe it will be found to be generally successful in the treatment of Aneurisms, in punctures of large arteries, and of divisions of those of smaller calibre. It could hardly promise success in the complete division of a large artery, for the artery in such a case must be closed; and the degree of pressure to do this, would rarely be endured for sufficient length of time to cause its complete occlusion. But for the other cases, I have no hesitation in giving it as my opinion, that compression is the best method of treatment.

ART. VI.—*Hernia cured by a Blow.* By ALBAN SMITH PAYNE, M. D. (Communicated in a Letter to the Editor.)

Paris, September 5th, 1847.

MR. EDITOR,—The only apology I shall offer, in noticing the following case of Hernia, is my firm belief that it possesses some peculiarities, which have a direct practical bearing upon the rational treatment to be employed in the radical cure of these cases. I think it also offers us some little insight into the ways and means, by which nature seeks to relieve herself of these deficiencies. It is a case affording peculiar interest to me, as it appears to prove my treatment to be based upon sound physiological laws. At the same time it demonstrates to a certainty, the theory I have always believed and advanced to be correct. It is always truly gratifying to one, to find his treatment of disease harmonizing with the laws of nature, and supported by pathological investigations.

With these remarks, I will proceed to state the case as briefly as possible. Lewis H., having heard of my success in treating rupture, consulted me, giving this history of himself: is æt. 41, stout, and robust, generally healthy, of sanguineous temperament, blacksmith by trade. After a powerful muscular effort, 22 months ago, felt something give way; and his bowels came down. His physician at the time placed upon him a common truss with a large pad; which he was wearing when I first saw him. Has had occasion to have his bowels reduced several times. Upon examination I pronounced him laboring under oblique inguinal Hernia of the right groin. By careful examination, I ascertained the aperture to be of sufficient size to admit the point of my little finger. I told him the truss he was wearing was only intended to prevent his intestines from falling out. Explained to him why it was it could only prove a mere palliation, and could never effect a complete cure. That for my part, I deemed it a dangerous palliation. That he was likely at any time to have serious trouble.

I informed him that if I had anything to do with his case, I should attempt its radical cure; and in so doing I would have to exert pressure sufficient to excite adhesive inflammation, and he must expect to be subjected to some pain. He promised to go by my directions. For want of a better apparatus, I took an ordinary truss, capable of exerting considerable pressure; to its large pad I made fast a piece of cork, covered with buckskin, which I took care to have just the size to close the aperture, fully and tightly. If the patient will keep the horizontal posture, a common bandage answers a better purpose, as you can with it more easily regulate and graduate your pressure, rendering it more uniform. Thus regulated, I placed upon him my contrivance: the same night it commenced to pain him, he displaced it, and betook himself to his old friend again. A few days after, when in the act of lifting the hind foot of a horse he was about to shoe, the horse let fly his heels, and struck him just over the pad of his truss. I did not see him until 12 hours after the accident; I found him, as it were, in "articulo mortis." Intestines down, and immensely swollen; pulseless at the wrists and ankles, countenance of a pale ashy hue, bathed in a cold, clammy, sour perspiration, occasional hiccough was the chief sign of life, quantities of his fæces and contents of stomach covered the floor beside the bed upon which he lay. At first, I doubted whether I should be justifiable in delaying to give taxis even a trial; but proceed at once to the operation, as I feared sphacelation of the gut had already taken place. But things being badly arranged for an operation, I concluded to make the attempt at reduction. I was happily disappointed, my attempt proved successful, and almost instantly there was a manifest amelioration of the fearful symptoms. His system rallied nobly. His pulse began to rise. His countenance cleared away. The cold, clammy perspiration began to subside, and he dropped into a sound, quiet sleep.

That night, re-action reached its acme. I do n't think I ever witnessed a more intense degree of inflammation than supervened in his case. I combatted the inflammation energetically, and decisively. I had to bring to bear upon him all the most powerful antiphlogistic agents, to keep him from slipping through my fingers. But fortune smiling, I brought him through. When he was able to leave his bed, I found his rupture radically cured.

From the above case, and many others, which I have successfully treated, I believe myself justified in deducing the following conclusions. 1st. That almost all cases, (provided you have any stamina of constitution,) can, by judicious treatment, be radically cured. 2d. That some physicians, beholding in inflammation the most terrible of all phantoms, fail to relieve many cases, in which a little boldness would be successful. 3d. I come to the conclusion, from the above case, that adhesive inflammation, and ordinarily inflammation, differ only in degree of intensity. 4th. That adhesive inflammation is not, as Sir John Hunter supposed, "sui generis." I fear something like the following too often occurs. A patient finds himself ruptured, consults his physician as to what he must do. "Is advised to wear a truss." No attention is paid to the size of the aperture. None to the pads being of the exact size, to snugly close it. There is no regulation of the pressure. He follows his instructions, and "wears a truss." The first time he makes a muscular effort, or misstep, down come the intestines. His physician is called, they are reduced, and on goes the same truss again. This is repeated, oft repeated, until at last, his physician is out of place; none can be had, strangulation takes place, and the poor patient succumbs, never dreaming of his affliction being subservient to art. Should this be so? In my humble judgment, the radical cure should always be attempted, and will, I think, rarely fail, provided you close with the pad the aperture, fully and tightly, and firm uniform pressure be applied. By this means, you are sure to get up the so called "adhesive inflammation," and the hole is closed. If I am correctly informed, Mr. Golding of your city has invented a truss, calculated fully to meet these ends, and to obviate all the defects and deficiencies of the ordinary truss. If so, it will prove of infinite service and convenience, not only to the practitioner, but will greatly add to the comfort and safety of the afflicted. He well deserves the thanks and patronage, not only of the profession, but the public at large.

And now, Mr. Editor, with your permission, I will offer a few remarks upon "trusses," "the mode of applying taxis," "treatment of Hernia, etc." The pads of all the trusses of the present day are too large, much too large; varying from the size of a hickory nut to a man's fist. Now it is rare you find the aperture larger than cleverly to admit the point of your finger, unless in old, flaccid, broken-down constitutions.

A truss with pads too large to close the hole tightly, often do more mischief than good. In this way. The main-spring becoming weakened by use, and the pad not fitting the aperture, frequently in stooping allow the mass partially to protrude; on the patient's suddenly assuming the erect position, the pad catches, and crowds the mass against the parietes of the abdomen, frequently bruising them, and running the risk of mortification. Some physicians are well satisfied with palliative treatment. With me it is the dernier ressort. When I have tried everything likely to complete a cure, and fail, then I am content with palliative treatment; and not until then. Too much attention cannot be given in the manner of applying taxis; little or no force should be used. Too much force, I am satisfied, often produces what is very charitably laid at the door of the "mass being down too long." My maxim is, no force, and a deal of patience. After resorting to many modes of taxis, and apparently with making no progress, I have found. that by receiving the mass in the palm of the hand, and using a screwing, grinding motion, the mass to return, with that peculiar gurgling sound. In reducing Hernia, my chief reliance for assistance is in the warm-bath, and ice, just as the one, or the other, seems indicated. It is true, venesection may be sometimes necessary. The tartras antimonii et potassa, if used, should be so with circumspection, as we are apt to have nausea and vomiting sufficient, independent of its use. Tobacco I would never use, for these considerations: 1st. We can form no just idea of the prostration it may induce; that is, its effects upon the system are too uncertain. 2d. If the patient has to submit to the operation, he will bear it badly, or rather, re-action is too much enfeebled by its exhibition. After I have given taxis, in all its modes and phases, a fair trial, and it availeth not, my rule is to cut,—paying but little attention to the various membranes and coverings I pass through, but relying, mainly, upon my knowledge of anatomy, and common sense, to carry me through.

Did time allow, and were I not fearful of its being objectionable to you, I should be pleased to institute a comparison between the human system and the "United States." I should assume, that the nerves are nature's "telegraphic wires." The arteries and veins, her avenues of transportation, etc., etc. By carrying on the analogy further, I could at least draw some amusing and theoretical conclusions. Now, what does strangulation of a part imply? Is it not a part so constricted, as to be cut off from all "telegraphic connection," from all nervous supply, with its fellow-parts, and of course receiving no support, must perish, and die for the want of "nervous stimulation?" So an army, surrounded, and cut off from all supply of raiment and provisions, if not soon relieved, must perish for the want of sustenance, for from food man draws his main supply of nervous stimulants. A few more playful remarks, Mr. Editor, and I have done. I imagine something like this takes place, when a strong truss is placed over a rupture. By my firm pressure, I trespass upon nature's ground; she feels it, and being incensed, she prepares to resist my interference. She feels, and transmits her excitement through her "telegraphic wires," the nerves. Her nervous system, thrown into tumultuous action by my pressure, transmits the excitement to the whole system. The nerves, nature's trusty messengers, soon marshal her forces, and quickly bring them into the field of action. The arteries and veins, her principal avenues of transportation, hurry along their quantum in the shape of fibrin, albumen, etc. And it is even contended by some writers, that upon the journey, the fibrin and albumen occupy different positions in the vessel. The lymphatics likewise, being apprised of the trouble by the "telegraphic communicants," and becoming excited, send along and pour out the necessary quantity of "plastic lymph." With these forces and ingredients upon the ground, nature is prepared to commence operations. The phenomena of coagulation, organization, separation, and resolution, is quickly gone through with, and you have the chink closed. There is still something yet left for nature to do. There has been a surplus of material, a rubbish, left over, which by exerting pressure upon her "telegraphic wires," excite them ; again they give the signal for help. The absorbents respond to the call, come to their work nobly. They soon take up all surplus material, all rubbish. The excitable nerves being no longer interrupted, or imposed upon, regain their lost tranquillity, and "quiescat in pace."

Art. VII.—*Description of the Bloomingdale Asylum for the Insane, and the System of Moral Regimen pursued in the Treatment of its Patients.* By Pliny Earle, M.D., Physician to the Asylum.

Section 1st.—*Of the Farm and Buildings.*—The Bloomingdale Asylum for the Insane is within the limits of the municipal jurisdiction of the city of New-York. It is on 117th-street, between the Tenth and the Eleventh Avenues, seven miles N. N. E. of the City Hall, and about a quarter of a mile from the banks of the Hudson river, which it overlooks. It is upon one of the most elevated hills, known in history as the Harlem Heights, and commands a prospect, which for extent, variety, and beauty, is rarely equalled.

The farm contains about fifty-five acres, and is bounded, on its western side, by the Bloomingdale road. About thirty acres of it is under high cultivation, portions being devoted to grass, vegetables, and ornamental shrubbery.

The part last mentioned includes a liberal space, which is laid out and planted in one of the most approved styles of English gardening. This having been done in the earliest years of the institution, the trees, of which there is a great variety, have many of them attained their full growth ; and as, from year to year, deficiencies have been supplied and the variety increased, the grounds will favorably compare with most in the country. In short, there are but few upon this side of the Atlantic which bear so strong a resemblance to the beautiful homesteads of the wealthy, in the rural, cultivated districts of England.

In thus perfecting this part of the establishment, the governors of the institution have adopted, and faithfully pursued, that system of moral regimen essential to the best interests of the insane, by avoiding, as far as possible, the aspect of a prison, and surrounding the buildings with agreeable prospects.

The principal edifice is constructed of reddish-brown freestone. smoothly hewn. It is three stories high, besides the basement and attic, and consists of a central portion and two wings, the united length of which is two hundred and eleven feet. The central portion contains the offices and the private apartments for the officers. The wings are occupied by patients; that on the west by men, and that on the east by women. On each floor of either wing, a hall or corridor, ten and a half feet in width, extends the whole length through the centre, having apartments upon both sides. One large room, at the extremity of the hall, on every floor, is used as a sitting and dining-room. The others are lodging rooms of different dimensions, sufficient to accommodate from one to four beds each. There is also a room fitted up as a wardrobe, and one as a water-closet, on every floor in each story of the wing, besides a bath-room on the second story.

Parallel with the western extremity of this edifice, and about one hundred and fifty feet in its rear, there is another building, constructed of brick, fifty-seven feet long, thirty-two feet eight inches wide, and three stories high. The corridors are ten feet wide, and the rooms are mostly of uniform size, being nine feet two inches in length by seven feet two inches in width. In the rear of the eastern extremity of the principal edifice, and parallel with the building just described, stands a third, the basement of which is a laundry, while the upper two stories are occupied by female patients. It is sixty-six feet six inches long, by thirty-eight feet wide. The corridors are nine feet six inches wide, and the patients' rooms nine feet six inches long, by six feet six inches wide.

There are six bathing rooms in the establishment. Two of these have already been mentioned. There is one in the basement of each wing of the principal edifice, and one in each of the smaller buildings.

The water used in the Asylum is obtained from wells and springs. together with what is collected from the roofs. Several subterranean cisterns, and six tanks in the attic of the main building, each holding thirteen hogsheads, are the reservoirs for that which is collected from the source last mentioned.

Every department devoted to patients is heated by air furnaces. with the exception of the sitting and dining rooms in the principal building, in each of which there is a coal fire, in either a grate or a stove. Coal is the principal fuel used in the establishment. The annual consumption is about two hundred tons. Most of the water used in domestic purposes, and all that is used in the washing of clothes, is heated by steam.

There are two kitchens: one for the officers, the other for the use of the rest of the household. Fourteen tables are set at each meal; one for the officers, ten for the patients, and three for the domestics.

The principal out-buildings on the premises are a barn, including stables and carriage-house, an ice-house, and a green-house, or conservatory. The barn is large, and built of stone in the most substantial manner. The green-house contains about seven hundred plants. many of them rare and beautiful exotics.

Section 2.—*Moral Treatment.*—1st. *Generdl Remarks.*—In the moral regimen adopted at this institution, every practicable effort is made to pursue that system, at once gentle, philosophical and practical, which has resulted from the active and strenuous endeavors of many philanthropists, in the course of the last half century, to meliorate the condition of the insane. The primary object is to treat the patients, so far as their condition will possibly admit, as if they were still in the enjoyment of the healthy exercise of their mental faculties. An important desideratum for the attainment of this object is, to make their condition, as boarders, as comfortable as possible; that they may be the less sensible of the deprivations to which they are subjected by a removal from home. Nor is it less essential to extend to them the privilege or the right of as much liberty, as much freedom from personal restraint, as is compatible with their safety, the safety of others, and the judicious administration of other branches of curative treatment. The courtesies of civilized and social life are not to be forgotten; tending, as they do, to the promotion of the first great object already mentioned, and operating, to no inconsiderable extent, as a means of effecting restoration to mental health.

The means generally included in what is termed moral treatment, although many of them operate upon the mind by increasing the physical activity and energy, will be described under their respective heads.

2d. *Manual Labor.*—Some employment for the hands, of a description requiring a degree of exercise of the body sufficient to preserve and increase the activity and vigor of all its organs, as well as to promote sound and healthful sleep, is acknowledged, by all who are conversant with the treatment of insanity, as it appears in public institutions, to be the most effectual of all restorative measures not purely medical. Hence, some physicians have recommended compulsory labor in cases where the patients will not engage in it voluntarily. At this asylum, the patients are advised, and if possible, induced to apply themselves to some useful occupation, but no compulsory measures are resorted to for the purpose of enforcing it.

A very large proportion of the inmates are from the classes unaccustomed to manual labor. These, with very rare exceptions, will never commence any employment of the kind while at the Asylum.

Another large class of the patients are mechanics and artisans from the city, unaccustomed to any occupation other than that to which they were bred, and facilities for pursuing which cannot, in most cases, be furnished here or at any similar institution.

Finally, of those who are acquainted with, and habituated to, such kind of labor as can be furnished here, a considerable proportion are rendered unfit to work by their disease; and others, though able, will not work, because, to them apparently the best of all reason, they pay their board.

With all these adverse influences, it cannot be expected that, in an institution accommodating but about seventy of either sex, the number should be large who devote any considerable portion of their time to labor. There are some, however, who work upon the farm, others in the carpenter's shop the kitchen, or the laundry; while numerous small jobs about the establishment furnish employment to a considerable number of the men.

A much larger proportion of women than of men labor voluntarily, not only because all classes of women, in this country, are, with but few exceptions, taught to use the needle, but because this species of labor is one which can be introduced into the apartments of the patients.

Could some light occupation, requiring but little mechanical ingenuity or skill, be carried on in all the wards of the men's department, the number of laborers on that side might be materially augmented.

3d.—*Religious Worship.*—It is believed that the first attempt, in the United States, to hold a meeting for religious worship in an institution for the Insane, was made at the Lunatic Asylum adjoining the New-York Hospital,—the building for which the Bloomingdale Asylum was erected as a substitute. On the 31st of August, 1819, the Rev. John Stanford, a venerable divine who will long be remembered for his active benevolence, preached a sermon to the inmates of that institution an occasion to which he alludes in the following manner, in the writings published in his memoir:—

"About forty of the most composed of the patients were assembled; and several of the governors, the physician of the house, and the superintendent of the Hospital, attended on the occasion. The patients conducted themselves with great propriety, and many, of their own accord, kneeled while prayer was offered, and several expressed their thanks at the close of the service."

In the year 1832, a chaplain was employed at the Bloomingdale Asylum, and regularly, since that time, such patients as were suitable have assembled, on the Sabbath, for divine worship. With one hundred and forty patients in the Asylum, the average number in attendance is about eighty-five. Their deportment, with few and rare exceptions, is characterized by good order, decorum, and a regard to the proprieties of the place and the object of the assembly.

To a large majority of the patients, these services are beneficial. To a few, such as are very melancholy, disposed to excessive contemplation upon religious subjects, and hopeless of salvation for themselves, the tendency is thought to be injurious, and they are, consequently, not permitted to attend.

4th. *Recreative Exercise.*—a. *Importance of Exercise.*—A considerable portion of the insane are impatient of detention, and an abridgment of their personal independence of action. Another portion, quite as large, especially in institutions that have been in operation many years, are inactive, stupid, and disposed to be constantly sitting or lying down. To gratify the former, to rouse the latter, and as a hygeinic measure for all, it is intended, at this Asylum, that every patient capable of leaving the house shall have a certain degree of exercise daily out of doors. Hence, after the morning visit of the Physician, and again after dinner, such patients as are allowed the liberty of the premises, go out unattended, and all the others in the men's department are transferred to the airing courts or yards.

b. *Airing Courts, or Yards.*—There are three of these courts for the men, and four for the women. They are, with one exception, well shaded with trees, and three of them have large bowers covered with roofs, and furnished with seats for all the patients admitted into the courts.

An opinion unfavorable to airing courts has been expressed by several eminent Physicians connected with Asylums in the United States. The principal objections which have been urged against them are, first, their prison-like aspect; and, second, the patients admitted into them are liable to lie upon the ground, and thereby injure their health.

The first objection is easily answered. The airing courts at the Retreat near York, England, at the York Lunatic Asylum, and at some of the other institutions in Europe, have a much stronger resemblance to a beautiful garden than to the yard of a penitentiary. It is an old adage, true as trite, that "what man has done man may do," and if the courts of foreign institutions can be made so cheerful and attractive, there is no obstacle sufficient to prevent the attainment of the same object in the United States.

The second objection may be as easily met. At this Asylum, the courts occupied by the men are kept constantly under observation, by an attendant whose time is wholly devoted to this purpose; and among the rules by which he is to govern his conduct, are the following:

"He must see that each patient has a hat while in the yard, and that the clothes of all are kept properly arranged, the pantaloons, vest, and shirt-collar buttoned.

"He must not permit the patients to lie on the ground while in the yard, but must endeavor to amuse, encourage and assist them in their games."

The Physicians who object to yards, or courts, advocate, as a substitute, open verandahs guarded by lattice-work, such as are found at the Massachusetts State Lunatic Hospital, and at some of the other institutions of this country.

It appears to us that, to the minds of the patients, these must be much more constantly suggestive of imprisonment, or confinement than a large, well-shaded, cultivated court. And it is presumed that no one will endeavor to maintain that the exercise to be obtained in a necessarily restricted space, upon a floor, can be so conducive to health, as that which is gained in a court of liberal dimensions, in the open air, and upon the ground.

The most approved and best of hygeinic or of curative measures may be badly managed; but it needs no argument to prove, that the abuse of a thing should prevent the use of it in a judicious manner.

c. *Walking.*—One attendant devotes his whole time, at suitable hours in the day, to walking with the men, over the premises and throughout the neighboring country; and all the attendants, of both sexes, are required to walk, daily, with some of the patients under their care. They frequently make excursions of several miles, visiting the Receiving Reservoir of the Croton Water, the High Bridge, or Aqueduct intended to convey that water over the Harlem River; the Trinity Church Cemetery, and other places of interest in the vicinity. In the proper season, some are permitted to go to the neighboring river to bathe or to fish.

d. *Riding.*—Two horses, and a carriage with seats for eight, are wholly devoted to the use of the patients. The carriage goes out regularly, in suitable weather, from two to four times a day, taking the patients in rotation. It goes from six to eight miles at each excursion, the direction being varied as much as the many roads and streets in the vicinity will allow.

5th. Instruction.—a. *Lectures.*—Soon after the writer of this article first directed his attention to the treatment of the insane, he became convinced that lectures, upon scientific and miscellaneous subjects, might be made an object of interest, as well as of utility, in the moral treatment of patients in public institutions. Accordingly, being at that time connected with the Frankford Asylum, near Philadelphia, he induced the managers of that institution to purchase an air-pump, and other philosophical apparatus; and with the aid of these, he gave a series of experimental lectures before the patients, in the winter of 1840–41; and again in the winter of 1841–42. The results were as favorable as had been anticipated.

The writer became connected with the Bloomingdale Asylum in the spring of 1844, and in the autumn of the same year, encouraged by the governors, who made a liberal appropriation for the purchase of the apparatus, commenced a course of lectures, which were continued through the winter. The success was sufficient to induce perseverance in the plan, and a similar course has been delivered in each succeeding year, since that time. The last course commenced on the 12th of October, 1846, and ended on the 3d of May, 1847. It consisted of thirty-eight lectures, viz.:

Natural Philosophy, - - - -	four	Lectures.
Chemistry, - - - - - - -	six	"
Animal Physiology, - - - -	nine	"
Astronomy, - - - - - -	ten	"
Physical, Intellectual, and Moral Beauty,	two	"
Recitations of Poetry, - - - -	one	"
History and description of Malta, - -	two	"
Greece as it was in 1838, - -	two	"
Characteristics of the Americans and Europeans,	two	"

The subjects were illustrated with suitable apparatus, of which the following is a schedule:

1st. An air-pump, with its accompaniments.

2d. A set of mechanical powers.

3d. A magic-lantern.

4th. An Orrery.

5th. An electrical machine, with its implements.

6th. Pneumatic trough, receivers, retorts, and other articles used in chemistry.

7th. One hundred and forty-six diagrams, painted upon bleached muslin, illustrative of the structure of the human frame, and that of the lower orders of animals.

8th. Twenty similar diagrams, explanatory of the laws and phenomena of light.

9th. Twenty-five astronomical diagrams.

10th. One hundred diagrams, illustrating various subjects.

The lectures were delivered in the evening, and attended by an average number of about seventy patients Their attention and deportment would compare favorably with that of the audiences ordinarily attendant upon lectures.

It will be perceived that such subjects were selected as are susceptible of demonstration or illustration, experimentally, or through the medium of diagrams. Such topics are considered as the most suitable, inasmuch as the perceptive faculties are called into action, by addressing the eye, as well as the ear. As a general rule, this holds good; but of all lectures mentioned in the foregoing list, it is believed that none commanded more profound attention, or gave more general satisfaction, than that which consisted of the recitation of poetry, with remarks upon the character of the pieces, and upon the authors by whom they were written.

As a simple method of exerting disciplinary restraint, simultaneously, over a large number of patients, a means of fixing the attention, and withdrawing the minds of comparatively a multitude from the delusions incident to their disease, we believe there is no plan, hitherto adopted, in the system of moral treatment, which will prove more generally and extensively useful, than that of judicious and well-managed lectures.

b. *School.*—In the autumn of 1845, a school was commenced in the men's department, and continued until the following spring. It was suspended during the summer, but again opened, and kept during the winter of 1846–7. It was attended by from twenty to thirty patients, of various ages; and in a diversity of conditions, in regard to mental disorder. The ordinary English branches were taught, and in these a few of the younger patients made some progress. Others reviewed what they had previously studied, and others interested, or amused themselves, by reading from entertaining books, and newspapers.

It is not to be expected that any considerable advancement in valuable knowledge can ever be attained in a school for the insane. The only object within reach, and the only one which need to be expected,—and this indeed is much,—is that of extending a moral control over large numbers at once; of subduing excitement, rousing the inactive, and giving a new current to the thoughts.

c. *Library.*—A miscellaneous library, of about a thousand volumes is devoted to the use of the patients; and five daily and eight weekly newspapers, two monthly magazines and four quarterly reviews are also taken for them. Thus an inexhaustible fund of reading is supplied, and a librarian distributes it to such patients as are disposed to make use of it.

6th. *Amusements.*—a. *Games.*—Facilities for various diversions are afforded to the patients. A bowling alley, or nine pins, holds the first rank among the means of this species of moral treatment, whether we regard its utility, or the number of patients who resort to it for amusement. The interest of the game renders it sufficiently attractive and absorbing; while the physical force required, gives a considerable amount of wholesome exercise. Quoits, the bat-ball, the foot-ball, and swing, are the other principal means of amusement out of doors.

For amusements in the house, bagatelle, the battledore, the graces, chess, checkers, backgammon, cards, and various other games.

b. *Music.*—A piano, a viol, a violin, a bugle, a drum, flutes and fifes, are at the command of such as have a taste for music.

c. *Parties.*—On one evening in each week, during the cold season, the convalescent and convalescing patients, to the number of from ten to fifteen of each sex, are invited into a parlor, in the central building, where, in company with the officers, they pass a few hours sociably, or engage in such games as may be introduced. Refreshments are supplied, and in this, as well as in other respects, these parties differ but little from similar assemblies in private houses.

d. *Dancing.*—On one evening in each month, during the cold season, there is a cotillion party, or ball, attended by from sixty to seventy of the patients. No means of entertainment gives more general satisfaction than this; and upon the class of persons admitted here, its general influence is evidently beneficial.

6th. *Restraints.*—Since the establishment of this institution, the opinions of those concerned in the management of the insane have passed through a variety of phases, in regard to the extent to which corporeal restraint and other coercive measures are necessary, in the proper management of patients. From the ultra ideas of the old *regime*, in which the discipline of an institution of this kind was almost identical with that of a common jail,—and in some instances even worse,—there has been a gradual, but constant mitigation of severity, in both theory and practice, until the opposite extreme has been reached, and the doctrine of the entire abolition of the use of restraining appliances for the body, or limbs, has been promulgated as that which alone is compatible with the true interests and the judicious treatment of the insane. Keeping pace, to a certain point, with this progressive sentiment, and directed by the surest of all guides, the light of experience the executive officers of this institution have, gradually abandoned the more exceptionable forms of restraint, and more rarely resorted to those of a milder character. They have never, however, become proselytes to the doctrine of the absolutely entire disuse of all restraining apparatus. There are exceptions to all rules, which are not governed by the invariable laws of mathematics, or of moral right; and no argument, however subtle, or specious, or to appearances however strongly based, theoretically, upon benevolence, philanthropy, kindness, and the golden rule of doing to others as we would, under similar circumstances, that they should do unto us, can overthrow our belief,—founded upon the observation of several years,—that there are cases, in which the welfare of the patient and the dictates of true humanity require a resort to some restraining means. The truth of this proposition may be, and perhaps is, acknowledged by all. Yet those who, in their recession from left-hand defections, have, in our judgment, fallen into right-hand errors, assert that, in the cases alluded to, whatever restraint is applied, should be that of the hands of the attendants. To this substitute, or subterfuge, we cannot resort, knowing as we do the greater irritation produced in a patient by being held by the hands of attendants, than by having his limbs confined by mechanical appliances. In the former, mind struggles with mind; in the latter, with matter alone. The only means of restraint now used in the Asylum, are the Camisole, or long sleeves, leather muffs for the hands, and the invaluable apparatus, invented by Dr. Rufus Wyman, for confining a patient in bed.

The Camisole is, in nearly all cases, sufficient. During the last three years, the muffs have not been used in more than two or three cases annually, and in those for but a day or two, or at most, but a few days each. There was one period of thirteen months, during which restraint was resorted to but in two cases, in the men's department. In one of these, the patient, while in a condition of typhoid delirium, wore a Camisole three days; and in the other, the patient's hands were similarly confined, a few hours, to ensure the vesication of a blister.

We have found that the proportion of women, requiring restraint, is greater than that of men; and in this, it is believed that our experience coincides with that of physicians of other institutions.

In no less than three cases, in which there was prolonged and exhausting excitement, we are convinced that Wyman's bed apparatus has been the means of insuring sleep, and of saving the life of the patient. It is a means of restraint with which every institution should be supplied.

8th. *Attendants.*—It requires but little experience, in an Asylum, to convince a person of the identity between a judicious, parental government, and that system of management which is best adapted to the insane. The motives, the influences, and, as a general rule, the means necessary for the good government of children, are equally applicable and equally efficient for the insane. In fact, this system is the great desideratum at every Asylum; and without it, it is impossible for the management to approximate that degree of perfection which it is desirable to attain.

The most essential element of success, in the establishment and maintenance of such a government, is a corps of intelligent attendants, of kind disposition, and good judgment. Such, and such alone, can sustain a disciplinary code, founded upon kindness, and supported with firmness.

Much pains have been taken at this institution to procure attendants of this character; and, especially as regards the men's department, the efforts have been rewarded with a good degree of success. Nearly all the young men who have been so employed, during the last few years, were from the country, and so well educated, that they had been accustomed to teaching school in the winter.

It is needless to describe, in detail, the numerous advantages of attendants of this kind, over those who are ignorant, and whose only ideas of exerting control over others, are measured by the strength of their arms. He who has once tried the former, would greatly deplore the exigency which should render it necessary to return to the latter.

Such are the principal facilities afforded for moral treatment at this Asylum. They are sufficiently extensive, if frequently called into requisition, not only to break the monotony of hospital life, and promote the contentment of the patients, but also, to effect much towards the accomplishment of the great object of the institution,—the reinstatement of reason upon the seat from which it has been dethroned.

ART. VIII.—*Remarks on the prevalent Diseases of the Counties of Chenango and Broome, New York, since the year* 1807. By AUGUSTUS WILLARD, M. D., of Greene, N. Y.

IN relation to the Hygeine of this part of the country, I send you some discursive notes, drawn partly from my own knowledge and observation, and partly from other sources. You are at liberty to make such use of them as you shall deem proper. I know nothing, of my own knowledge, of the diseases of the country previous to 1824. The sketch of diseases previous to that year, I have derived from Dr. Farr, an old and reputable practitioner of this town, who has now retired from business. He settled here in 1807; at that time the population of the town was about 1,000; it now amounts to 4.000.

Our observations refer chiefly to the south-western part of Chenango and the adjoining parts of Broome co. The counties of Chenango and Broome are generally, and without doubt, truly considered as among the most healthy in the State. The surface of the country is hilly, but not mountainous. It is well watered by the Susquehanna, the Chenango, the Tioughnioughga, and the Otselic rivers, besides many smaller streams. The valleys are beautiful and fertile—the hills are susceptible of cultivation to their very summits, there are no malarious swamps and marshes to contaminate the air with their noxious exhalations—the water is very pure, and living springs are abundant.

During the first settlement of the country, Intermittents were very common, but were confined mostly to the rivers and valleys, while the hill country was almost or entirely free from them. In the year 1807, a biliary remittent fever prevailed to some extent, but did not prove very fatal. It had something of an active character, and the patients bore depletion tolerably well, and seemed particularly to require free cathartirizing. In 1808 an epidemic Dysentery made its appearance during the months of July and August; many cases were severe, and it often proved fatal, particularly under the then customary treatment, which was the use of liberal and frequent mercurial cathartics, given on the supposition that the disease was essentially of bilious origin. In the fall of the same year, an Influenza was very universal; it did not, however, prove fatal, except in some cases of aged persons. Influenza has also been epidemic here in the years 1824, 1837 and 1843. That of 1843 occurred in the latter part of June and July, and was very severe, but not fatal, except, as usual, among the aged.

In 1812, *the epidemic*, as it was called, made its appearance in the latter part of the winter and spring. It was extremely unmanageable and very fatal. This, I presume, was the same disease which at, and before that time, had appeared in, and overrun, the Eastern States, and was known there as the Spotted Fever. Here, however, the spotted appearance was not seen, but the disease assumed the shape of Typhoid Pneumonia; at any rate, the lungs seemed to suffer particularly. In the latter part of the summer and fall of 1813, a fever somewhat peculiar in its character prevailed. There were symptoms of biliary derangement, not much excitement, and a good deal of tendency to subsultus tendinum. The patients did not bear depletion, and on the whole the fever was decidedly typhoid, and may perhaps have partaken somewhat of the character of *The Epidemic* of the preceding year. It was also peculiar in its duration, which was not unfrequently extended to 35 or 40 days. It was not very fatal.

In 1814 an epidemic Dysentery again spread through the country, but there was nothing peculiar in its appearance or treatment, and its character was mild.

After this date the country was generally healthy. There were no epidemics of any description, except the influenza; occasionally, cases of inflammation of the lungs and other organs; sometimes a few cases of fever of a remittent type; and during the summer months, some few dysenteries and other ordinary summer complaints happened until the spring 1829, when, for the first time, the Scarlet Fever appeared; and since then there has been more or less of it every year. It has not however prevailed extensively since four or five years after its first advent, and seems, on the whole, now, to have almost entirely disappeared. The first case of the disease was in the town of Coventry, in a remote section of the town, far removed from any travelled thorough-fare, and in a family which had been always healthy, and had in no way been exposed to any influences which would at all tend to give rise to the disease. There can be no doubt that it was entirely of spontaneous origin, without the least reference whatever to the matter of contagion in any form. It has never seemed to me to be any more contagious than our ordinary fevers. It was mostly confined to children, although some adults contracted it. Sometimes it would run through a whole family, sometimes part of a family would have it and the remainder would escape, perhaps for months, and then be taken with the disease; sometimes a single one in a large family would come down with it, and the rest escape entirely. It seldom happened that the disease occurred twice in the same individual, but such instances did occasionally happen. The disease has never been so extremely severe and fatal here, as it is said to have been in many places, although there have been not unfrequently deaths from it. The treatment has varied from year to year, as the disease showed different phases. I believe that during the first year or two of its prevalence, a more active treatment was required than has been necessary since. Some years it has been quite mild, requiring little or no treatment.

About the time the Scarlatina made its appearance, there seemed to be a peculiar tendency to eruptive diseases. Measles were common, and in many instances it was extremely difficult to distinguish it from scarlet fever, so much did they in the general appearance of the eruption, and the affection of the throat, resemble each other. The smallpox, too, broke out in several places about the country, in which it was said no exposure to the disease could be traced. This was about the beginning of the winter 1830–31. In one instance it seems almost certain that there had been no exposure; it is certain that none could be traced by the most particular and minute inquiries. It appeared in a middle-aged man who had not been away from home for weeks; he lived remote from any public place, and his daily business was half a mile from any road, or any neighbor; he died of the disease; many persons contracted it from him, but I think it did not prove fatal in but one other instance. This case led to a harassing lawsuit; one of our physicians having been accused of communicating the disease to him for the worst of purposes, so that there was a necessity for discovering, if possible, its origin. There are no effects without adequate causes. Time was when a certain catenation of circumstances produced the *first* case of smallpox: why might it not happen, that in the course of events the same catenation might not again take place, producing the like effects?

The Asiatic Cholera did not visit us. There was but one case of it within my knowledge, and that was imported from New-York. The individual recovered, and no one else had the slightest symptom of it.

I do not know that any particular disease can be said to be endemic to this location. We have more or less cases of fever of the remittent form, approaching the typhoid, every year; but it is seldom general enough to say it is a *prevailing disease*.

It is perhaps a little curious, that ordinarily, fevers are more common and more severe on the high grounds than along the rivers. I have never known, for the last 20 years, fevers to prevail, to any great extent, along the valley of the Chenango, except perhaps in one or two limited districts; while on the hills, where one would most naturally look for healthy locations, there have been instances of severe and unmanageable ones appearing. For instance, in the town of Coventry, which occupies the high ground between the Chenango and Susquehanna rivers, fevers have been frequent and fatal.

Perhaps the most frequent diseases are those of the lungs, and there is one among them which may perhaps be looked upon as the scourge of the country. I allude to Consumption. I have no doubt but one fourth of all the adults who die in this town, die of this disease; nor can there be any doubt that the disease is fearfully on the increase, and in a far greater ratio than the population is increasing. I am credibly informed, that forty years ago the disease was comparatively rare; not more than one in ten adults dying with it. I am unable to give any reason for this terrible increase of the disease. It might perhaps be looked for in the changeableness of the climate; but after all, this would only be a *cause* of the complaint, and not of its *increase*, for I suppose the climate has not essentially varied for the last forty years. Perhaps there is no part of the State where the extremes of temperature are greater than here. I have known a variation of 50° Fahrenheit in a few hours, and I have seen the mercury 36° below zero in winter, and I have known it in the summer to stand at 98°, making a range of 134°.

There may be something in the climate that disposes to Scrofula, for I am induced to believe that that state of the constitution is rather of common occurrence. Goître was formerly seen pretty frequently, but for some years past it seems to be disappearing, while Consumption appears to have replaced it. There is another disease which is becoming rather common, and is at all times difficult of management. It is the "Nursing Sore Mouth." Whether it is more frequent here than in many other places, I do not know, but of this I am certain, that it is more frequent in this town than in any other in the country. This is not the proper place to go into the pathology and treatment; both, however, are sufficiently obscure.

You will perceive, from this sketchy and imperfect article, that the diseases of this locality have not very greatly changed since the country has been fairly settled. Intermittents, the "growth and produce of the country," have almost entirely disappeared; it is rare that a case is found, except in one neighborhood where local causes give rise to it. Consumption is on the increase without doubt, and I think that "Nursing Sore Mouth," (perhaps I should call it Anemia,) may, on the whole, be called *new* to the country.

I take the liberty to send you a copy of a printed document in my possession, which may perhaps be a matter of curiosity, if it be of no further use to you, as showing the health of the "*Genesee Country*," nearly fifty years ago. The paper was handed to me by Mr. Cameron, an old gentleman residing in this place, who was at the time an assessor of one of the towns, and engaged in getting up the statistics. It was done by the direction and at the expense of Charles Williamson, Esq., agent of the Pulteney estate, for the purpose of showing the health of the country; as a report had got abroad that it was very unhealthy. This report, of course, very seriously interfered with the settlement of the country. The county of Ontario, at the date of this document, comprehended the whole of the State west of the "Pre-emption line," which was a line drawn from Sodus Bay on Lake Ontario, southerly through, or nearly through, Seneca Lake, about a mile east of

Geneva, to Pennsylvania line, with the exception of the county of Steuben, which had been erected the year previously. Several of the towns named in this paper, you will perceive, do not now exist; and I have endeavored, so far as I am able, to note some of the towns which now occupy their places. I may be mistaken in some instances, but I believe I am pretty generally correct.

I have copied the paper, verbatim et literatim, except that I have in a few instances mended the orthography of the diseases where the misspelling was perfectly evident. In one instance I have altered the word, though I am in doubt about what it does mean. In the towns of Jerusalem and Hartford you will find one reported to have died of Hydrops; the word in the original is spelled *Hychops;* this may mean *Hiccups*, for aught I know. Please take your choice of the three terms.

[Want of space compels us to omit this Table.]

Art. IX.—*On the Use of Nitrate of Silver in Acute Laryngitis.* By T. R. Varick, M. D., New-York.

I was called on the morning of June 18th, 1847, at 7 o'clock, to see Mrs. E.,—æt. 40, who was said to be choking to death. On repairing to the place, I found her in the following condition: face pale and bedewed with a cold perspiration, countenance anxious, respiration difficult, she appearing to be on the point of suffocation, speechless and unable to swallow. The fauces had a slight inflammatory blush, and the tonsils were slightly enlarged, pulse full and about 100, tenderness on pressure over the thyroid cartilage.

On making inquiries concerning the case, I ascertained that she had been laboring under "a bad cold," since the Monday previous, (this being Friday,) which she had contracted by exposure, while following her occupation, that of washing. The prospect was truly appalling. From her inability to swallow, I was deprived of a resort to the usual remedies. The first thing that occurred to me was Tracheotomy; but, before resorting to that, I determined to try the effect of the topical application of a solution of the Nitrate of Silver. I accordingly procured the folowing:

R. Arg. Nitrat. ℈ii. Aq. Distillat. ℥j. M.

This solution I passed, by means of a sponge attached to a curved bougie, through the rima glottidis into the larynx. The application was followed for a short time with a good deal of spasm. I followed the application with a blister placed immediately over the thyroid cartilage, and ordered twelve leeches to be applied over the upper bone of the sternum. In this state I left her. I called in in about three hours, and found her much relieved. The blister had not drawn, as it had become displaced by her continual tossing, and the leeches had not been applied, on account of her being unable, from her extreme poverty, to procure them. She could now speak in a whisper, and the power of deglutition had returned. I repeated the application, and put her on tart. antimony, in nauseating doses. I also bled her to the extent of eight ounces, the blood having a highly-buffed and cupped appearance.

3 o'clock, p. m. The blister has drawn well, symptoms continue to

improve. The antimony has vomited her twice; stopped it, and ordered calomel in doses of two grains every two hours.

I called the next morning and found the progress to a cure uninerrupted; she complained of a bad taste in the mouth, which was no doubt occasioned by the mercury. Ordered,

℞. Ol. Ricini, ℥j.

I also re-applied the solution. She afterwards continued to improve, and was discharged the next day without farther treatment.

Remarks.—The details of the preceding case furnish two points for consideration. 1st, How much had the nitrate of silver to do in the cure? And, 2d, What part did the other treatment play? 1st, How much had the nitrate of silver to do in the cure? In the consideration of this point, I think it well to review the condition in which I found her, viz.: gasping respiration, unable to swallow or to speak, slight inflammatory blush about the fauces, with some enlargement of the tonsils. As the power of deglutition was lost, she could take no internal remedy. Her case demanded prompt and energetic treatment. It will be seen, by referring to the record of the case, that the application was made three hours before any other remedy was brought into operation; during which time the power of deglutition had returned, as had also that of speech, and the relief afforded the respiration was immense. In the record of two cases of croup, treated in this manner by Dr. Blakeman of this city, (vide N. Y. Journal of Medicine, vol. viii., p. 209,) the effects were produced in a different manner from the one in which I employed it. On referring to the record mentioned above, we see that it was followed by free vomiting, in both instances; and in the first case, where it was used as a "dernier ressort," a large quantity of false membrane was evacuated. In my case no such effect followed, but great relief was the result, and that, more particularly on its first application, which must be borne in mind, was three hours before anything else was made available. Dr. Horace Green, who has practised, and still continues to practise, this treatment in chronic laryngeal affections with great success, has also applied it to acute cases. The effect of inflammation situated in the neighborhood of cellular tissue, is to produce abundant effusion into it, as we see in Erysipelas; and as we know of the efficacy of *the application in the latter disease, in subduing inflammation and promoting absorption,* why may it not come into general use in laryngeal disease, particularly of an acute character, as the two, viz., erysipelas and laryngitis, must be considered in many instances similar, if not identical: for, is not the mucous membrane a continuation of the skin? Is it not subject to many of the same diseases? Will it not, on being exposed to the action of the air, and deprived of its natural covering of mucus, become converted into ordinary integument? Again, may not laryngitis be viewed as a species of erysipelas? Such is the opinion of Mr. George Budd, who advocated the doctrine in a paper read before the "Royal Medico-Chirurgical Society," (vide London Lancet, vol. v., p. 520). The local application of a solution of nitrate of silver to the interior of the larynx was at one time laughed at; and attempts were actually made to demonstrate, from anatomical preparations, the impossibility of the undertaking, and after its practicability had been fully established.

The next thing advanced was, that it could be productive of no benefit; or, at least, that it might be used without any harm.

2d. What part did the auxiliary treatment play? On looking at the list of remedies employed, we see that the most active agents were resorted to: viz. tart. antimony, blistering, bleeding and calomel; remedies which have been in use for years, and which are universally employed in diseases of this character. It may be advanced, that the cure was principally effected by the latter remedies employed; but with all, holding this opinion, I differ; for, to what are we to ascribe the return of the powers of deglutition and speech, and the great relief to the dyspnœa, before any other means produced their effect? Surely not to the recuperative powers of nature. We know that there is no "let up" in this disease, particularly when advanced to the stage this had, that of "œdema glottidis." It may be asked, why was not general bleeding resorted to in the first instance? My reason for not doing so is, that the disease had advanced beyond its first stage, and all the powers of the system were required to carry on respiration; and I consider that as she was very much exhausted, general depletion would have added but injury, by still farther reducing the muscular power that was necessary for the performance of the all-important function. The conclusions that may be adduced are the following:

1st. That the nitrate of silver was the principal agent in saving the woman's life. 2d. That although the cure was no doubt accelerated by the auxiliary treatment, we have reason to suppose that the progress to a favorable termination would have gone on equally as certain, although perhaps not quite so rapidly. 3d. That the use of the local application of the nitrate of silver may be considered a powerful remedy in acute laryngeal and tracheal affections. 4th. That it may be used with benefit at the commencement or at any subsequent period of the disease.

Art. X.—*On the Source and Influence of Malaria in the South-west.* By Dr. A. G. Lawton, of Marshall, Missouri. (Continued from vol. ix., page 57.)

It was the opinion of Labaraque, that the effluvia arising from decomposing animal matter had no deleterious influence on the human constitution; in support of which, able proof is adduced. (Journal of Foreign Medicine for 1828, vol. ii., page 381, E. Littell, Phila.)

This also was the opinion of Bancroft, and some others. Whatever combination of circumstances might be necessary to produce this poison, one thing is certain, that is, that water is one of the elements always necessary to its production; and that the water must be in small quantities, is evident from the fact, that the earth sends forth this effluvia in the greatest abundance in the last stage of its drying. I do not believe that decomposing animal matter will always necessarily produce it, for it requires a union of elements brought together under certain circumstances, implying a certain degree of heat, moisture, and matter, aided by a slow grade of decomposition, in order to the perfect development of this deleterious effluvia; hence Labaraque was right when he said as above quoted, he having reference to the *rapid* decomposition of dead bodies, for here we do not have the manner of decay, or the circumstances combined which are necessary to produce it.

What I conceive to be the most prolific source of malaria is, animal matter in minute fragments, mingled with vegetable matter in a process of *slow* decay. Where wash-water is being constantly thrown out, around houses, in by and shady places, amongst rubbish, where old bones and vegetable matter are left to rot by slow degrees, it cannot fail, after a long time, to give rise to, or produce a pestilential effluvia, especially in very dry seasons; for it is generally the case that wash-water contains more or less animal matter, and that, too, of a kind favorable for the generation of miasmatic exhalations.

It will be found generally the case, that the sickly season does not commence until the thermometer falls a little from its extreme point, and the sky assumes that peculiar veiled appearance that it has in the latter part of the summer, and the autumnal months, or in very dry times. The fore part of the season is the healthiest part of the year, for the heavy rains and storms of the spring have swept all noxious matter from the air, and left it rightly and equally tempered. It generally happens, that as the drought increases the dews lessen, until the healthful moisture of the air is gone. Now, at this time, the intensity of the sun's rays is on the wane, for this occurs in the latter part of summer and fall, and the hottest days of the year are in the last of June and the fore part of July, and the most sickly time is in September, and sometimes in October.

When the dews begin to lessen a little, the sky assumes a dark or red appearance, and the sun's rays are a little blunted, as though its rays were in some way obstructed; until now, the evaporation from the earth's surface is not very poisonous, but now the evaporation from all the highlands, and drier part of the country, is very trifling, and daily lessen; and now the drought increases. At this time the water is mostly gone from the earth's surface; the ground parched by drought; the atmosphere already deprived of all healthy sources, whereby it might be supplied with moisture, at the very time when there is the greatest necessity for it; and this lack of humidity in the air must be supplied from some source, and this vacancy is soon filled up by an increased and rapid evaporation, from the half-dried swamps, stagnant pools, sinks, gutters, sewers, and from the banks and bottoms of streams, where the water has fallen and left the mud exposed; from these sources the moisture of the air is still maintained, and the atmosphere is still humid.

But now the equilibrium of the air is partially destroyed, it being over-dry in some places, and excessively humid in others; for this humidity is not like that humidity which comes from clouds and storms of rain, which in itself is harmless, but it is a humidity formed of noxious vapors, constantly springing from decomposing matter; which, being either chemically united or mechanically mixed with some elementary principle evolved from decomposing matter, is thereby rendered much heavier than humidity from other sources, and becomes incapable of rising very high in the air, unless it is forced up by some fixed current of wind; and thus it happens that, under these circumstances, the atmosphere becomes unequally tempered. And now the moisture of the earth is so far exhausted on all the uplands, that it cannot afford much material for evaporation, and this process is of necessity limited to a small surface, that is, from swamps, marshes, ponds, streams, etc., from which places evaporation is very much increased, and the vapors rise in denser volumes, bringing up the poisonous exhalations from these places, where vegetation, flies and reptiles, have fallen and rotted for ages; where the matter, after being long steeped, is every year dried down, in the latter part of which process there is formed, and evolved from this mass, by the action or re-action of decomposing elements on themselves, a something which we call *malaria*, long known by its effect, being followed by a certain train of diseases peculiar to themselves, and known to be produced by no other morbific agent.

Now, under these circumstances, should the wind be low, which is generally the case, sometimes a dead calm prevails, or the wind sets lightly from an eastern direction, blowing with a current just strong enough to move the poisonous vapor from its resting place, and spread it over the country; and should this state of things exist long, and progress to an intense degree, a sickly time must inevitably follow; and when this state of things does progress to an intense degree, it is generally brought to bear most severely on the community in the autumnal months, increasing as the cold season approaches, or until some violent storm or frost occurs; when the reverse of this happens, the sickness of the season is very much modified, assuming less of an epidemic character.

I am convinced, from experiments and observations, that wood is capable of generating an immense amount of this poison; decomposition of the ligneous fibre is slow, and where it is long exposed to wet and dry, as in marshes, pools, and about houses, for many years, I believe it will produce a pestilential effluvia. If pools of water, standing in the blue clay on these prairies, have nothing of the wood kind in them, the weather being very dry and hot, so the water does not move in or out of these pools, in two or three months the water becomes perfectly sweet and clear, and if it is not agitated from the bottom, it may be drunk or used with impunity; but if these pools contain logs, chips, brush, leaves, or wood of any kind, that is, old and in a decaying state, then the water never becomes either sweet or clear, but assumes a dark color, and the drier the weather, the blacker it gets, when it becomes an active and certain poison, producing on the human constitution sudden and alarming effects, accompanied with excessive vomiting and purging, extreme prostration, and death. And how much sickness there is produced by drinking water impregnated with this poison, is difficult to say, as water holds it in solution in every degree, from the minutest quantity, which would require years to affect the constitution, up to a degree of concentration sufficient to destroy life in a few hours.

The Indians suffer less from these causes than the whites, and the reason is obvious: they seldom live long in a place, constantly moving from one place to another, and often burn their tents, and erect new ones, and a fire is kept constantly burning in the centre of the tent, around which they sleep; they do not live long enough in a place for the accumulation of filth to become an effectual source of disease.

Although these countries, as a general thing, are not subject to extreme atmospheric vicissitudes, yet it sometimes happens that we have inflammatory diseases in the cold half of the year, as inflammation of the lungs, pleura, and the like; and although they occur at a season of the year when the air is free from all noxious exhalations, yet they generally assume that grade and type which is common to malarial fevers, and they generally fall most intensely on those living nearest the focus of miasmal emanations; hence I count them as malarial; and taking this view of the subject, I have long since concluded to bleed less and give quinine more, and with this treatment I have been much more fortunate than when I used the lancet.

But antimony is our main reliance in these cases. Tart. antimony, judiciously administered, will seldom disappoint the physician's expectations. As soon as the pulse falls, and the expectoration becomes a little modified, I add quinine to the antimonial powders; and when the antimony is no longer indicated, I continue the quinine, combined with ipecac., and sometimes Dover's powder. (My Dover's powder is made with the nitrate of potassa in place of the sulphate.)

I have only one thing more to add at this time, and that is, with respect to the use of quinine, combined as described in my former paper.* Make a powder of quinine, camphor and pulvis Doveri, then the powder will contain quinine, nitre, opium, ipecac., and camphor: now, if you increase the ipecacuanha a little, you will have a better powder for winter fevers, for ipecac. increases the effect of quinine very much, especially in fevers that verge towards the continued type. I look upon opium and camphor as important additions to quinine, unless contra-indicated, and we seldom meet with a case where nitre is not admissible. In treating fevers, there are many indications to be fulfilled, some of which quinine alone would not effectually meet. Quinine sometimes operates too locally, and the addition of camphor gives it a more general searching effect; and if the effect should not be increased, I believe it is more effectual by being more particularly directed to certain indications to be fulfilled, which is just what we should be led to expect from *a priori* reasoning; and in addition to all this, it sometimes becomes necessary to add a more potent and diffusible stimulant, as brandy.

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* New York Journal of Medicine, vol. 8, p. 69.

PART SECOND.

Critical Analysis.

Art. XI.—*A Practical Treatise on Venereal Diseases:* or, Critical and Experimental Researches on Inoculation, applied to the Study of these Affections; with a Therapeutical Summary, and Special Formulary. By Ph. Ricord, M. D., Surgeon of the Venereal Hospital of Paris, Clinical Professor of Special Pathology, etc., etc. A new Translation from the French.

The growing interest which is evinced by the profession, in the thorough and philosophic investigation of the various maladies originating in Syphilitic infection, will obviate the necessity for apology, in bringing again before them the principles embodied in the work of M. Ricord, which has for some years past been regarded as standard authority in this department of medical research.

Although the *many* may have "learned, marked, and inwardly digested" the facts and theories pertaining to this subject, the supposition, that they may as yet have escaped the observation of the *few*, renders it highly probable that a condensation and brief review of the interesting questions raised, and the remedial measures proposed by Ricord in his valuable treatise, will not be uninteresting to that few at least. For it must be admitted that, until his time, great difference of opinion prevailed, not only in respect to the pathology and history of venereal diseases, but also in their treatment; and to his experiments and observations mainly belongs the credit of establishing upon a sure and philosophical basis their etiology and distinctions. The use and importance of Inoculation as a diagnostic and prognostic test, was the first great step taken towards the correct understanding of these affections; and this step was first taken by Ricord; and, had he stopped here, he would still have conferred upon this department of medicine incalculable benefit.

Leaving out of the question the non-virulent or blennorrhagic affections, we purpose to restrict our observations entirely to true or virulent inoculable syphilis, and the consecutive diseases arising out of it.

Our author introduces his subject by proofs of the existence of a specific virus, which he denominates the venereal virus; identical in its character and capable of re-producing itself by inoculation; and this is the sole producing cause of primary symptoms. He says:

> 'Now the incontestible existence of the venereal virus is proved, by a peculiar property, of a distinct morbid secretion, and therefore the pus furnished by certain syphilitic affections has the constant and regular property of re-producing a pus similar to itself, in consequence of an alteration identical with that which first secreted it.' P. 31.

M. Ricord has performed an immense number of inoculations, with the various secretions, poured out by ulcerations of every kind, and his experiments have brought him to the conclusion that the virus secreted by the chancre alone, during the period of ulceration or increase, is capable of producing chancre. Thus on page 45:

> 'All the normal or morbid secretions of persons reputedly syphilitic, have been examined by means of inoculation, and only one form has given uniform and constant results; and this form is the primary ulcer, or chancre.'
>
> 'This chancre is to constitutional syphilis what the bite of a mad dog is to hydrophobia, and does not produce a specific pus except at a certain period of its existence.'
>
> 'The primary syphilitic ulcer cannot be the same in all its stages; and it cannot cicatrize without first becoming a simple ulcer, by the destruction of the cause which served to maintain it. Similar results cannot be required from these different phases; it is the period of development, or statu quo, of the ulceration, while there is no effort at cicatrization, that the chancre secretes the venereal virus.'
>
> 'Thus a chancre on the end of the finger, on the foot, thigh, or tip of the tongue, will (if it has not been modified,) produce pus, capable of producing a similar chancre, by inoculation, without the participation of the sexual organs; whilst no other affection of these organs, whatever its form or extent, or the degree of inflammation which may accompany it, can re-produce a chancre.'

Inoculation is performed by a small portion of the virus taken upon the point of a lancet and inserted under the epidermis. On the second day a small papule is seen, surrounded by a red areola; from the the third to the fourth day this becomes vesicular, with a depression at its centre; on the fifth day a pustule is defined, resembling very closely the pustule of smallpox; and now the areola fades and an effusion of plastic lymph produces the characteristic induration surrounding the sore. From this time the pus becomes more thick, and crusts begin to form; if these are detached we find an excavated ulcer seated on a hard base, and covered by a grey pseudo-membrane, which is difficult to be removed. The following are the results produced by inoculation of morbid discharges and the indications derived therefrom.

Between the years 1831–1837, M. Ricord inoculated 1151 cases of chancres, virulent buboes, and primary pustules, occurring in both sexes, all of which produced the pustule, which is the direct antecedent of chancre. During the same period, inoculation was performed from 518 cases, comprising chancre in the period of reparation, mucous tubercles, secondary and tertiary symptoms, with results wholly negative;—the pus produced nothing.

985 cases of venereal affections, not depending on the syphilitic virus, including sympathetic and primitive buboes, blennorrhœa, balanitis, ulceration of testicles, and vegetations having various forms and seats, were inoculated, with negative results.

Some 75 cases of chronic ulcers, herpes, scrofula, ostitis, etc., produced no results upon inoculation. From these, and analogous experiments, the following deductions are drawn: That primary syphilis alone is inoculable; that the venereal virus is only secreted during a certain period of the ulceration. That blennorrhœa, in all its forms, is non-inoculable, and cannot produce chancre; and, therefore, by this test, the non-identity of the two diseases is established; and that secondary and tertiary syphilis will not produce primary symptoms. It will therefore be perceived, that inoculation serves to distinguish from each other the reputed primary symptoms of syphilis, and that it draws the line of demarcation between primary and secondary symptoms, besides affording us the only positive method of diagnosis; for the mere appearance, seat, and history of the ulceration, is oftentimes fallacious, many of the simple affections closely resembling those which are virulent; it assists us materially in the treatment, and in the selection of medicinal agents, proper to be employed. Nor are its advantages less conspicuous in the prognosis, for it teaches us that every person, who has had inoculable symptoms, remains positively susceptible to general infection, and liable afterwards to symptoms of constitutional syphilis.

It is to be regretted that our author has been so meagre in the practical portion of his work. After the splendid chapters on the philosophy of venereal diseases, it was to have been expected that he would have given to the world, in a more extended manner, the result of his experience in their treatment. In this we have been disappointed, not that fault can be found with what he has imparted, but regret that he had not imparted more.

He urges strenuously the importance of destroying chancres, as soon as possible after their inception, by the abortive method; viz., cauterization with the nitrate of silver, or excision.

> 'Whatever form a chancre may assume at its commencement, it ought to be treated by the abortive method; for there is no authenticated instance of ulcers, destroyed within the first five days after infection, having afterwards given rise to secondary symptoms, if these ulcers existed alone, and without other actual complications.' P. 220.—Again:
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> 'Therefore, whenever after a suspicious connexion, a pustule is formed upon the organs exposed to the contagion, *whatever its nature may be, and without an exact diagnosis being requisite,* it must be ruptured, and its base well cauterized; for no bad effects would be felt, even were a mistake made, and pustules of eczema or herpes cauterized. The caustic to be preferred in this case, is a pointed piece of nitrate of silver, by which all the parts exposed can be reached.' P. 221.

It will be observed that our author, regarding chancre as strictly a local affection, relies entirely upon the destruction of the ulcer by cauterization, and the subsequent cure of the sore without resorting to constitutional medication. According to his theory, no chancre, if radically destroyed before the fifth day of its existence, is capable of producing constitutional infection. We are satisfied that there are many exceptions to this rule, and that exclusive reliance upon it has favored the development of secondary syphilis, where a cautious, general medication, might have obviated this result.

In certain constitutions, absorption takes place with great rapidity; and experience has proved, in many instances the lymphatics have imbibed the virus very soon after the formation of the chancre. It is no uncommon thing to find that a true venereal bubo has formed, and gone on to suppuration, in the course of a few days; much within the limits prescribed by Ricord. And furthermore, it is not always possible, by the caustic, to radically change the character of the sore. Some point may have been left untouched, or, acting only upon the superfices of the ulcer, the more profound portion still continued to secrete the virus. There is strong reason to believe, that the whole indurated tissue is charged with this morbid secretion; if this be true, the cauterization merely locks it up, while absorption goes on from within. Doubtless, in very many cases, the destruction of the chancre by caustic is an effectual abortive; but the exceptions are not a few. Where the patient will submit, if we are to rely solely upon this plan, excision would seem to be the safest and surest method. Inasmuch, therefore, as we are unable to ascertain frequently whether absorption has taken place or not, it would seem to be a dictate of prudence, that we should keep in view the probability of this event, and act accordingly. If, then, constitutional infection should take place, we have our patient prepared for active treatment; and should it not occur, no harm can accrue from general specific medication, properly administered.

Our author's management of chancres differs but little from the modes ordinarily employed. Repeated applications of caustic, with dressing of lint, moistened with aromatic wine, black wash, etc., until the period of ulceration has passed, and the stage of reparation supervenes, when the treatment becomes the same as for a simple ulcer. One or two points deserve attention; concerning these, Ricord can speak for himself.

Of the period of reparation, he observes:

> 'When the period of reparation arrives, as long as it goes on regularly, the dressings with aromatic wine may be continued, and the cauterizations resumed only when it becomes necessary to repress the exuberent granulations. Frequently only the epidermis is wanting to complete the cure; the surface of the ulcer becomes level with the surrounding parts, remains red, and yields hardly any secretion, but yet does not heal; then the superficial application of the nitrate of silver, so as just to whiten the surface, without cauterizing, suffices to terminate it.' P. 225.

Concealed chancres, or, as they are termed, chancres larvés, have received elucidation from Ricord; and the aid they afford us, in pronouncing upon otherwise anomalous forms of the disease, is highly important and valuable. It not unfrequently happens that secondary symptoms declare themselves, without the patient or his physician having been conscious of the existence of chancre. There was a discharge from the urethra, with ardor urinæ, etc., supposed to be gonorrhœa; or gonorrhœa may really have been present as a complication. Now, in these cases, the consecutive effects owed their origin to a chancre at some point of the urethra out of sight, and therefore unsuspected.

It is important to bear in mind this complication, and to be able to detect its presence. This sometimes is not easy, especially if it coexist with gonorrhœa. If the chancre is seated at the meatus, ocular inspection decides the matter at once. The following considerations will assist the diagnosis, under other circumstances.

The chancre in the urethra usually gives rise to a secretion from the canal, from the sixth to the twelfth day after connexion; it has a sanious appearance, and inoculation produces the pustule; pain is felt at a particular portion of the canal. When induration exists, it is likewise confined to a point, is well defined, and cartilaginous. In gonorrhœa, redness is observed at the meatus; the discharge follows soon after contagion; it is muco-purulent, and when blood is found in it, it is rather bloody than streaked, as in chancre. There is pain along the canal, chordee, and the induration, when it occurs, is general, or invades chiefly the deeper portions, and is deficient in the cartilaginous feel so peculiar to chancre.

His treatment is thus detailed:

> 'When the urethra is the seat of the chancre, and it is complicated with symptoms of acute blennorrhœa, recourse must first be had to antiphlogistic treatment; leeches to the perinæum and penis, emollient opiated fomentations, baths, and copious draughts of mild fluids. I give, every evening, opium and camphor pills, to prevent the erections, which distend the diseased surfaces and cause them to crack, thereby augmenting the ulceration. Often, when the blennorrhœal symptoms are not too intense, the cauterization with nitrate of silver, by means of Lallemand's caustic holder, may be used from the commencement; it acts in this case in the same manner as upon external chancres.'
>
> 'If the ulcer be perceptible, and seated at the entrance of the canal, the treatment for other chancres is quite applicable to it; only, when it can be borne, it is advisable to keep a small piece of lint between the lips of the meatus to prevent their touching. The blennorrhœa, which under those circumstances accompanies the chancre, disappears with it, where it alone is the cause, or yields only, when it is a concomitant affection, to remedies for blennorrhœa, which must be employed at the same time.'

Of the use of mercury in sloughing chancres he says:

> 'I can confidently assert, that, except in a very few cases, the so common employment of mercurial preparations, either as dressings or internally, are most hurtful in phagedenic chancres, and the more so, as not being accompanied by induration; there is more inflammation, and nervous irritability. It is by no means uncommon to see these chancres, when approaching the period of reparation, relapse under the influence of mercury, to their former state; and chancres which were at first limited and regular, become phagedenic from the employment of mercury.'

The importance of the indurated chancre, and the modifications of treatment it demands, require particular notice. For it is from this chancre that constitutional infection almost invariably arises. And here it is that mercury is indispensable; for the induration is the announcement that secondary symptoms are about to occur; and if mercury be in any manner a specific against the venereal element, here its use is indicated. In the other, and simpler forms of chancre, our author contents himself, for the most part, with local treatment; for they are much less frequently followed by constitutional disease. But even in these forms, if, after cicatrization, induration remain, or attend the sore during its period of ulceration, he resorts to mercury, with a view to its antidoting properties against the poison of syphilis. In the true indurated chancre, therefore, attended as it is from its very inception by this characteristic induration, upon this drug he places his principal reliance. For, as he truly remarks, in speaking of the difficulty of eradicating the malady by local applications:

> 'If a well-directed local treatment often produces a complete cure, it requires a long time, and is then imperfect. The difficulty of radically curing an indurated chancre by ordinary means, and the good effects of mercurials

in its treatment, have been the principal arguments which have caused it to be considered as the sole type of primary syphilis, and mercury as the only specific to be opposed to it.'

Particular idiosyncrasy of constitution, will demand judgment in the form of mercurial to be employed. As a general rule, the protoioduret, in one grain doses, in combination with cicuta, is as eligible a preparation as any. It should be given slowly, so as not to induce ptyalism before it has had time to exercise its effects upon the induration.

The chapter on buboes contains nothing of especial interest. He advises their discussion, if possible, and cautions us against confounding the bubo of absorption from scrofulous engorgements. Blistering the tumors, and dressing the denuded surface with a solution of corrosive sublimate, grs. xx. to ℥j. of water, until an eschar is formed, when emollient cataplasms are to be applied, is a favorite mode of dispersing buboes which have resisted gentler treatment. Of its beneficial effects we can speak from experience. Analogous to this, is the camphor moxa over the induration. These methods are attended with the disadvantage of producing considerable pain, and indelible scars, which limit their application in many instances. These objections do not obtain in simple blistering, frequently repeated, than which we know of no remedy of greater efficacy. Rest, compression, mercurial urinations, and local depletion, comprise the sum of the treatment. With reference to specific treatment, he thinks that the mere existence of a bubo is no stronger indication for its use than the existence of a chancre, except in certain conditions, and then frictions are to be preferred.

With this view we are inclined to differ. If absorption has taken place as far as the groin, we see no reason why it should not contaminate the fluids, unless arrested by specific medication. We can scarcely say to the venereal virus, when it has reached this point, 'thus far shalt thou go, and no farther,' and attempt to arrest its course by local applications. Consideration for the future safety of the patient, would suggest the use of such means as would be most likely to counteract and suspend the further advance of the disease.

Following the usual course and classification, Ricord divides secondary symptoms into those affecting the skin and mucous membranes. He opposes the idea, that these affections can arise, de novo, after a lapse of many years from the cure of the primary symptoms, although he has observed them, in one case, as early as eight days after the occurrence of chancre. He commences his treatment as soon as possible after they show themselves. If the syphilis exist with complications, he attempts the reduction of the disease to its simplest form. If these complications do not contra-indicate specific treatment, it is used simultaneously with that proper to eradicate the existing affections foreign to the disease. Thus, simple cutaneous eruptions, scrofula, and organic diseases, should be removed or modified, because they act as irritants, and are calculated to prolong the specific affection.

Antiphlogistic measures, diet, baths, sudorifics, tonics, etc., enter into the catalogue of remedies proper to be employed to effect this purpose, and to prepare the system for the reception of mercury. The cutaneous eruptions, venereal in their organ, he terms syphiloids.

These resemble in type idiopathic affections of the skin, and may be papular, pustular, squamous, or tubercular in their character. Some writers contend for the existence of vesicular syphilis. This he denies; or at least pronounces it an exceedingly rare affection. Doubtless, eczema or scabies may co-exist, but they have no direct relation, as effect to cause, to the syphilitic element. One form of eruption is somewhat new in this country, and therefore deserves notice. It is the mucous tubercle, or "tubercule muqueux" of the French. This form of secondary infection may occur the earliest after the primary symptoms, and by many is supposed to belong to this stage; but the fact, that it is non-inoculable, induces Ricord to place it among the secondary affections. For it will be remembered, that primary symptoms alone can re-produce themselves by inoculation. The secondary is only transmissible by hereditary descent, and the tertiary forms are neither inoculable nor transmissible. As the treatment of this tubercle is peculiar, we subjoin his remarks.

> "Whatever its seat may be, whether in the anus, vulva, groin, or between the toes, umbilicus, or axilla, at the same time as the general treatment which it requires as a secondary symptom is employed, the local medication, which from the rapidity of its result is truly specific, is as follows:"
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> "The diseased parts are first to be washed, if they are not indurated, with pure chloride of sodium, which, in the contrary cases, or where there is too much irritation, should be diluted with water, so as to excite slight tingling without pain. Then after washings, which are to be repeated twice a day, the diseased parts are to be sprinkled with calomel. Eight or ten days of this treatment will cause enormous masses of these eruptions to disappear, which, situated between the toes, have for many months prevented the patient from walking."

The observations of Ricord, on the use of mercury in confirmed syphilis, are valuable and judicious. While he acknowledges that it is not always absolutely specific, yet he contends that it is the most certain and powerful remedy we possess, and will, notwithstanding the objections which have been raised against it, maintain its rank as a therapeutical agent of the highest importance.

No doubt the advocates of the anti-mercurial school have based their arguments for its disuse upon the deleterious effects which its abuse has occasioned. For mercury, injudiciously employed, is capable of producing results little less disastrous than syphilis itself. Every drug of equal potency may be equally misused, and produce equally bad results. Too great care cannot be exercised in the selection of the proper cases, the right time, and manner of its exhibition. Many circumstances forbid its employment. The presence of scrofula, if it exist in any activity, anemiated states of system, and the cachexia induced by the disease itself, render the incautious use of mercury a hazardous proceeding.

Every practitioner is aware that he is frequently compelled to suspend its employment, until he has brought the system up to that point when advantage can be gained from its use. No time is lost by such a course, for the more force and stamina the constitution possesses, the sooner will he be able to drive out the venereal element; whereas, if this precaution is neglected, our remedies only aggravate the disease, while they render the system less able to re-act against it. Another serious error in the administration of mercury is, that it is given too fast. Ptyalism or diarrhœa is induced, which compels us to omit it, long before it has had time to operate upon the disease. It is much better to occupy several weeks, or even months, in producing this result, than to give the patient an ulcerated mouth, which only increases his susceptibility to its effects hereafter. The favorite preparation with our author is the protiodide, given in small doses, to be diminished or exhibited at longer intervals if its effects begin to manifest themselves too rapidly. As adjuvant, he recommends the sudorific ptisans of sarsaparilla, rumex, or mezereon, aided by the use of local or general baths. Salivation is always to be avoided, if possible; and we quote with great pleasure his remarks upon this subject:

> "If it be settled that salivation is useless in the cure, the progress of which it retards, and that it always constitutes a disease, if not most frequently serious, at least always tedious and painful, the greatest care must be taken to avoid it, by discontinuing the use of the agent which produced it as soon as the mouth becomes affected."

If these cautions are needed in Paris, where the disease exists with less of the complications contra-indicating its use, how much more applicable are they in our country, where scrofula and kindred maladies constitute so important an element in all forms of diseased action, insidiously undermining the citadel of life, by a slow and stealthy poison, which plants the elements of prostration and decay upon every step of morbid processes!

The chapter on tertiary affections is particularly brief and unsatisfactory. The importance of this class of symptoms, their obscurity, and difficulty of diagnosis, demanded a more extended notice from one whose opportunities and experience so well fitted him for the task. He alludes to the fact, that the secondary insensibly merge into the tertiary symptoms, without our being able, in many cases, to draw the line of demarcation between them.

After a greater length of time, this obscurity vanishes, and we have that group of affections denominated tertiary. The date of their origin and the progress of their development is often doubtful; but as they arise generally at long intervals after the primary disease, they lose, for the most part, their specific character, being non-contagious, and if transmissible at all, only transmit to the offspring habits and predispositions to disease, engendered by the broken and prostrated constitutions of the parents. Tertiary symptoms assimilate themselves very closely to other diseases, seated in the same tissues, and having to the venereal virus no relation as a cause. Therefore it is that the treatment loses its specific character, and must be based upon general principles and indications. Mercury now no longer finds a place, but must give way to remedies of a more tonic and antiscorbutic nature. Upon this subject Ricord speaks thus:

> "The mercurial treatment presents something remarkable to those who will attentively observe its action; thus we find it of little efficacy, and indeed often positively hurtful, in the primary affection, during the period of progression, or increasing ulceration; it then becomes powerful as soon as induration manifests itself in the chancre, and shows its greatest efficacy when the characteristic general infection is in the period of incontestable secondary affection, again losing its curative properties in the tertiary affections, the more so the further they are removed in their form from the preceding."

In this classification he includes deep-seated tubercles of the skin and mucous membranes, osteocopic pains, periostitis, syphilitic ostitis, gummata nodus, or deep tubercles of the cellular tissue, and some others of minor importance.

The treatment for the tubercular forms consists in the local application of emollients and narcotics; and if inflammation be present, leeches, applied at some distance from the tumors. If the tubercles are indolent, stimulating dressings, or cauterizations with the acid nitrate of mercury. The principal object of the physician, however, should be to sustain and recruit the constitution by all possible means.

> "It must be remembered, that we have to deal with a long and serious disease, which no medication can cut short in its development. As these symptoms generally appear in patients who have resisted the effects of mercury, it has therefore no power over it; and if its use be imprudently pushed far enough to produce the symptoms which may attend its administration, the severity of the disease will be increased."

The nocturnal pains in the limbs, periostitis, and ostitis, require a similar treatment.

Blisters to the painful parts are of great service; they may be dressed with opiated cerate, or, what we think better, sprinkled with morphine. Leeching is occasionally indicated, especially when the cellular tissue participates in the inflammation. In some cases, when the tension of the fibrous tissues is very great, relief can only be obtained by a deep incision; by which the strangulation is relieved. We have found in the more chronic cases, the application of emplast. hydrarg., or plasters of conium with iodide of lead, very satisfactory remedies.

But the grand heroic agent, in all these affections, is the iodide of potassium,—and we confess that we feel great surprise that our author has passed it by with such brief comment. Experience has shown that, in its specific control over tertiary syphilis, it is unsurpassed; and it holds the same position with regard to these affections as mercury does to the secondary forms. Many persons, whose nights for months had been sleepless from pain, have been tranquillized and relieved by a few full doses of this remedy. Nor are its results less valuable in those cases where pain is not a prominent symptom. It imparts tone to the system, improves the appetite, and at the same time counteracts those symptoms which scrofula has engrafted upon the original disease.

In this stage of the disease, also, opium becomes a very valuable agent, allaying, as it does, that undue irritability of the nervous system, and quieting attacks of pain. Mineral and vegetable tonics Ricord speaks of highly, especially the iodide of iron.

In conclusion, we would say, that no work upon venereal diseases with which we are acquainted, is so satisfactory in its descriptions of disease, or more entitled to credit and reliance in its rules of treatment. To the student, who wishes an intimate acquaintance with the philosophy of syphilis, it is invaluable, and not less useful to the physician as a guide in practice. H. M. G.

Art. XII.—*The General Nature and Treatment of Tumors.* By George Macilwain, M. D., London.

This is the title to a volume of 219 pages, devoted to a consideration of the Causes and Nature of Tumors, with a view to their removal by general treatment, without resorting to surgical operations. It is a work written in a true spirit of philosophical inquiry, and is replete with valuable and interesting suggestions. It is the more important, as it treats of a much-neglected and obscure subject. Our knowledge of the causes of tumors has always been very limited and indefinite, and our modes of treating them, to a very great extent, empirical; consisting either in extirpation with the knife, or the application of some supposed specific, as iodine, mercury, etc. And hence there is no part of the whole domain of surgery which stands in more need of a thorough investigation, aided by the microscope, chemical analysis, and a rigid appliance of *dietetic* regulations, than this. The author whose work lies before us, contends that all tumors or morbid deposits, whether benign or malignant, have their origin, primarily, in some one or more organs engaged in the process of assimilation or excretion. "No atom of our bodies can be built up," says he, "but by a series of processes, which may be expressed in one word, assimilation. The stomach, and other portions of the alimentary canal, the organs more immediately subservient to its functions, as the teeth, salivary glands, liver, pancreas, spleen, etc., must all perform their respective duties; the absorbent vessels and glands, the respiratory and circulating organs theirs; and, lastly, when the fluidified material (blood) is distributed to the various parts, the powers of the part must convert such material into the characteristic structure, whatever that may be; then again, the useless parts of the food, and the old materials of the body must be removed; thus the absorbents and veins must return the blood or other fluid charged with useless matter; and this must, as well as the feculent matter of the food, be conducted to the various outlets of the body, represented chiefly by the lungs, skin, kidneys, and bowels. Lastly, the nervous system, whence these various organs derive their power to do *anything* must be in a certain state of tranquillity." Again; on page 30, he says, "Strictly speaking, we are ignorant of the causes of tumors; at the same time, by a careful observation of facts by which they are preceded, accompanied, and followed, we can educe very important general propositions. 1st. That they are connected with *certain* conditions of the system. 2d. That these are connected with conditions of disorder, and that, in many cases, we can arrive at correct general ideas of the *nature* of such disorder; because we find that, in such cases, the removal of such disorder is accompanied by the absorption of the tumor. . . . Supposing, then, that I have thousands of examples showing that the proper and ordinary function of the body is to secrete, or build up, parts of bone, muscle, tendon, skin, etc.; and to eject certain other forms of matter; and that I see a man with a huge lump on his face, knowing that it is not a natural appendage to him, and if, on examination, I find that, whether it is like the ordinary structures or not, it is in a situation where it cannot serve the purposes to which they are applied; then, however ignorant I may be, in the *strict* sense of the term, of the cause of that lump, I am at least certain of this, that either the *food* contains something unusual, or that some of the assimilating organs are acting on it in some unusual manner, or both. This seems indisputable." But Macilwain not only makes tumors originate in defective action, or derangement of some one or more organs, but he also attributes to such depositions a true functional office. Thus, on page 33, he says, "Now, that tumors represent some function, is indisputable. Viewing them as only one class of unnatural depositions, let us examine those forms which link them most nearly to natural structures: such as hypertrophied organs; enlarged muscular structure of the heart and bladder; and again in the goître and enlarged prostate. There we see unnatural depositions truly, but under circumstances that compel us to admit that it serves some function; because, if I analyze the matter, I find myself thus compelled, exactly on the same grounds that I suppose the respective organs to have any functions at all. I know not, for instance, what the natural uses of the thyroid gland or prostate are; and I am equally in the dark as to the use of the respective enlargements of them: but in regard to the heart and bladder, I am in a somewhat different position: I know, for example, that their functions are—the one to pump forth the blood, the other to eject the urine; and the very knowledge that it is in the muscle that this power resides, suggests an increase of power as the proximate requisition established in the organ. Reflection readily suggests that this increase in a projecting organ can only result from its having more fluid to project, or obstacles to overcome; and accordingly we find that these severally represent the conditions which give rise to the disease; that is to say, a narrowing of the canals through which they eject their respective fluids, or, as in the heart too often, more fluid is sent to it than there ought to be. . . If we now continue our observation, we shall cease to find, perhaps, unnatural depositions represented by simple enlargement of organs; but still we may find many obviously consisting of the same materials as are employed in the construction of the body, as bone, cartilage; *many* having, indisputably, all the materials of a living part, and therefore affording the same grounds for the inference of a particular function. Some, on the other hand, appear unorganized; but then they are contained in cysts which *are;* and, as this is a plan pursued sometimes by nature in regard to foreign bodies, so that although retained, they may be said to be exterior to the body, it may *possibly* happen that many of such tumors may execute an excretory office merely; still there are none of any kind which more perfectly (I speak of the common wen) exemplify their definite relatións with the body: by their occasional absorption; by alteration of their contents; and, lastly, in the serious disturbance which has occasionally arisen from irritation of them." Another important point insisted on by our author is, that the seat of all diseases, (including tumors, of course,) is but seldom in the organ or tissue primarily at fault, but in the *compensating* organ or tissue. Thus an interruption or interference in the proper function of the skin will readily give rise to disease in the kidneys, liver, or bronchial membrane; but will seldom or never produce disease in the skin itself. But his views on this subject are best given in his own words. Thus, on page 74, he says, "What I mean is simply this: the cause of diabetes is not in the kidney; the cause of cutaneous diseases is not in the skin; the cause of tumors is not in the tumor; and so on." And again, on page 80, "let any one try the same question with reference to the more common seats of *all* diseases, and the organs said to be primarily disordered; and he will find the result of the inquiry ending in this: that those *impressions* which are most frequently the *originators* of disease, are *addressed* to one or other of the *most* important organs of the body; but that the disease, (whether it be a tumor, or any other usually subjected to surgeons,) is generally placed in a structure or organ less important than that on which the primarily-disturbing influence had impinged. In order to test this principle fairly, the *relative* importance of organs must, of course, be the guide. No doubt instances do occur of diseases being seated in the organ on which the primarily-disturbing influence had impinged; but all these imply excessive forces, or severe, dangerous, or fatal diseases," etc. In regard to the seat of tumors, Dr. Macilwain lays down this general proposition, viz.: "That there is a manifest tendency in the economy to place all unnatural depositions near the surface of the body, and in a structure (cellular tissue) where they interfere least with important functions; an incalculable majority being placed on or immediately under the skin." These several positions are illustrated and sustained by a great variety of facts and physiological deductions, well calculated to produce conviction in the mind of the reader. And the practical inferences involved, are so important as to demand for them the most careful consideration.

For if it be true that unnatural depositions, constituting the various forms of tumors, have their origin in derangement of some one or more of the organs of assimilation or excretion, then the practical inference, so strongly insisted on by our author, that the only consistent and rational mode of treatment must be founded on a removal of the primary derangement, assumes the form of incontrovertible truth. Or, to use his own language, "the original *cause* of no tumor can possibly reside in itself; because the cause must necessarily have *preceded* the tumor. That, therefore, the removal of any tumor by operation (excision) is perfectly compatible with the persistence of the cause whence it may have arisen. That, consistently with the foregoing, we can never predict, in any one case, that the removal of tumors by incision may not be followed by a recurrence of the malady, or its replacement by some other form of disease—a position abundantly confirmed by experience." Before, however, presenting the author's views in regard to the proper treatment of tumors, we must make one or two quotations from his chapter on the operation of medicines. On page 85, he says, "If, from such articles, (*i. e.*, food and condiments,) we now proceed to consider the action of medicines generally, we shall observe, in regard to a vast number of them, little more than exaggerated exemplifications of the very facts we had observed in regard to food—but with the following remarkable difference: in food, we could demonstrate that part of it nourished the body, and that part of it was rejected. In the same manner, in regard to condiments, we had no doubt, though in much less degree than in food, that they were partly nutritious, and partly otherwise; having some properties tending to excite actions ending only in their expulsion from the economy. In medicine, however, we begin to lose the evidence of *nutritious* property, and observe that a very large number of medicinal substances seem to be followed by immediate activity in one or more organs, *apparently* to effect their *expulsion;* and we are the more disposed to view it in this way, from the fact, that if we exalt the dose, we render these actions more and more violent; until we reach a point, at which they tend to the destruction of the body." And again; on the following page, he says, "In the *apparent* expulsion of various medicines, we observe a proneness in different organs to be affected by different substances. Many are refused ingress, as it were, and immediately rejected by the stomach; others are admitted, but, perhaps, not into the circulation, and rejected by the bowels; others excite increase of bile, which may end in the same results. Others, again, are received into the circulation, but soon ejected by the kidneys, (diuretics,) or skin, (diaphoretics,) etc. In short, it is impossible to resist the impression, that, in regard to an immense majority of medicines which are generally employed, or most usually relied on, they are presently followed by apparent endeavors at their expulsion. . . . It is not necessary, however, to assume, from the notorious facts to which I have adverted, that the matter expelled is bona fide that, *still less merely that*, which was represented by the médicine given; but that the effects occasioned have some relation to attempted expulsion of injurious matter, is rendered probable by the fact, that we generally increase the expulsive action consequent on food, by taking anything which the peculiar state of the system renders indigestible, (that is, innutritious,) or as certainly cause indisposition by its retention; being precisely what happens in regard to *a large class* of medicinal substances." Again, he says, "if the general action of medicine be that which the foregoing views would represent it to be, its beneficial effects would generally consist in the exciting the actions of different organs of the body; and in so doing it would very conceivably induce the ejection not only of the injurious influence represented by the medicine, but that resulting from the *loaded condition of the organ.*" The foregoing extracts are sufficient to give the reader a general idea of Dr. Macilwain's views concerning the origin and nature of tumors, and the *modus operandi* of medicines. And from them he will have already anticipated the general character of his treatment. This, instead of consisting in the administration or application of some supposed specific, or in excision without previous preparation, is directed entirely to the accomplishment of two objects, viz.: to correct the morbid condition of such organ or organs as seem to have given rise to the morbid deposit; and to avoid all such articles of diet, or other circumstances, as favor the generation in the circulating fluids of the system, of the materials of which the tumor is composed. And as, in fulfilling the first indication, the organ or organs at fault may be any of those connected with the processes of assimilation and excretion, so it is plain that no individual remedies can be pointed out as applicable in all cases; but the choice of medicinal agents must depend entirely on the organ or organs to be corrected. In accomplishing the second object, our author insists on sufficient exercise, pure air, the strict avoidance of *fat* or *grease*, *sugar*, *alcohol*, and all other articles that contain an excess of carbon in their composition. But on this head we want much more careful investigation into the chemical composition of different tumors or morbid depositions. Indeed, the great, and perhaps only, obstacle in the way of adopting in practice the principles advocated by Dr. Macilwain, is the minute and searching inquiry into the condition of the different organs and functions of the body, which is required in order to detect the cause of the tumor, and afford a foundation for the adoption of those medicinal and dietetic measures, which constitute a rational treatment. But this obstacle is plainly founded on either the ignorance or indolence of the practitioner, (not unfrequently both,) and therefore admits of an easy remedy. The extent to which we may control tumors, even of the most *malignant* character, by a rational treatment, will be best indicated by quoting the author's own language. On page 22, he says, "No physiological reason can be assigned why the same laws which lead to the unnatural deposition, might not be converted into the means of its removal; and that, though it may as yet be unsafe to assume that experience has exemplified the fact in regard to every species of tumor, it is equally unsafe to assert the contrary, in an absolute sense, in regard to any tumor whatever." And on page 217, he continues, "I will, therefore, only observe generally, that I know no form of deposition, to which the practice I would advocate has been fairly applied, which has not been influenced thereby; and many of the cases have been very striking. . . . And I see no end to the power we may gain over morbid depositions, if we will only take the trouble ordinarily bestowed on other scientific investigations." He relates several cases of well-marked carcinoma, situated in different localities, as the mammary gland, the scrotum, the lips, etc., entirely cured by constitutional and dietetic treatment; some of which we would gladly quote entire, did our limits permit. The reader, however, must not infer that Dr. Macilwain condemns all surgical operations for the removal of tumors. On the contrary, his position is, that as these diseases, whether benign or malignant, are dependent on or caused by more or less derangement of some of the functions of the body, such derangements must be ferreted out and removed before the removal of the tumor can be relied on as affording permanent relief. And further, that in many cases, even of carcinomatous and other malignant tumors, a long-continued perseverance in the same general treatment will cause the tumor to disappear entirely without any operation. Hence he says, "The fact is, that *tumors* are mere *symptoms* of deranged organs; they lie intermediately between affections of the surface of the body and the viscera; and if a tumor be removed, or an ulcer, without attending to the cause of its production, it must be followed, sooner or later, by some internal disease, or another tumor." Therefore he very justly insists that, in cases where extirpation is deemed advisable, the *cause* of the tumor should be first removed, by correcting all disordered functions; and the same course continued after extirpation, to prevent a return of the tumor or the attack of some other disease. And whatever we may think of the author's views of the curability of cancer and other malignant tumors, we fully agree with him in regard to the importance of due preparation of patients laboring under such diseases, before attempting extirpation; and we also cordially sanction the following sentiment viz.: "With regard to all diseases not yet brought within our power, I would beg to observe, that no malady can be cured by those who are determined to regard it as incurable. Men will never *effectually* strive to do things which they despair of being able to accomplish." We would gladly extend this review in such a manner as to enter fully into the subject before us, but neither time nor space will at present permit; we would strongly commend a perusal of Dr. Macilwain's treatise to all our readers. Before closing this article, however, we will glance at one other subject noticed in the work before us, viz.: the agency of respiration in the production of animal heat. It is here contended, in direct opposition to the views of Dr. S. L. Metcalfe, as expressed in the November number of this Journal, "that the lungs are *refrigerating* organs; and that it is by means of them, in combination with the skin, that animals maintain their characteristic temperature, by *throwing off* superfluous *caloric*." And this position is sustained by a variety of facts and sound reasoning, as we shall more fully show in a future article. A similar view was maintained by us in our Inaugural Essay, more than ten years since. But as it is our purpose to recur to this subject again in a future article, we shall leave it for the present.

N. S. D.

Art. XIII.—*The Trial of Caroline Lohman, alias Restell.* (Reported in full for the National Police Gazette.) 8vo. pp. 31. New-York. 1847.

The notorious Madame Restell was indicted and tried in this city, in the month of October last, before the Court of General Sessions, "for manslaughter in the second degree, for committing an abortion on the person of Maria Bodine, and killing her *quick* child, under the law of 1846.[*] There were five counts in the indictment, four of which were punishable with confinement in the State Prison, not less than four years, nor more than seven. One count charged the procurement of abortion of a child *not quick*, which is punishable as a misdemeanor only, by our laws.

Before proceeding to our account of the trial, we may be allowed to express our regret that the absurd distinction between women *quick* and *not quick* with child, should still deform the statute book of our State; a distinction resting on no valid foundation, and recently banished from British legislation. This error, so dangerous to morality and the best interests of society, is of ancient origin, and arose from a belief, in the infancy of science, that the sentient and vital principle was not infused into the fœtus until some time after conception. Hippocrates made this period for the male fœtus 30 days after conception, for the female 42, while in some parts of his writings he asserts that this does not occur till the perfect organization of the fœtus. This error was still further confirmed by the doctrines of the Stoics, that the soul was not united to the body before the act of respiration, thus making the fœtus inanimate during the whole period of utero-gestation. This doctrine, which prevailed until the age of Antoninus and Severus, gave place to the more popular sentiments of the sect of the *Academy*, who held, with Hippocrates, that the fœtus became animated at a certain early period of gestation. The same distinction was also made by the *Canon Law* of the Church of Rome, between the animate and inanimate fœtus, punishing the destruction of the former with the same severity as homicide.

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[*] The following is the law of this State, as it now stands, relative to abortion.

"Every person who shall administer to any woman pregnant with a *quick child*, or prescribe for any such woman, or advise or induce any such woman to take any medicine, drug or substance whatever, or shall use or employ any instrument or other means with intent thereby to destroy such child, unless the same shall have been necessary to preserve the life of such mother, shall, in case the death of such child or of such mother be thereby produced, be deemed guilty of manslaughter in the second degree."

How is it to be proved that the child was "quick," and how that the intent was to destroy the child? Is it lawful to induce premature labor at the seventh month, providing mother and child both survive? The law needs revision.—*Ed.*

Galen held that the fœtus became endowed with life about 40 days after conception, when he supposed it became organized; whilst others affixed different periods, and others, still making a further distinction between the imperfect embryo and the perfectly-formed fœtus, of course regarding abortion of the latter only as criminal. All these opinions, resting solely on hypothesis, unsustained either by argument or experiment, have had a direct tendency to countenance and encourage abortion during the early months of pregnancy.

This error is still supported by popular belief, and sustained by the laws of many civilized countries, including many of the States in our Union; virtually denying to the fœtus any vitality until after the time of *quickening*. The *English Law* formerly considered life as "not commencing before the infant is able to stir in its mother's womb," (*Blackstone*,) and it is only ten years since abortion *after quickening* was punished in Great Britain with death; while the same crime, *anterior to quickening*, was only viewed as felony; a distinction now no longer recognised in British law. We are sure that no process of reasoning, nor array of facts, is necessary to show that the fœtus is *alive*, prior to what is regarded as the period of quickening, and not *dead;* and that its destruction, in the one case, is as much an act of violence to physiological life as in the other; and consequently its criminality, in the eye of reason and morality, the same. The absence of consciousness on the part of the mother as to the motions of the child, is no proof that such motions do not exist; it may be owing to the fact that the liquor amnii is in greater proportion to the size of the fœtus in the earlier periods of pregnancy, than in the latter; and moreover, the child does not move in an active manner until after its muscular system has acquired a certain degree of development, and its motions, from this cause, are necessarily so weak that the woman does not often perceive them until in the course of the fourth month. But the fœtus is endowed with life from the earliest moment of conception, although the *manifestations* of life are more and more developed, up to the period of parturition. We trust every physician, therefore, who regards the welfare of his species, and the best interests of society, will do all in his power to dissipate this error, so fatal in its results, and so wide-spread in the community, that the *vitality* of the fœtus is imparted at quickening, and that procuring its abortion anterior to that time is not criminal.

But to return; the prosecution was conducted by the District Attorney, Mr. McKeon, and deputy, J. B. Philips, Esq., assisted by Ogden Hoffman, Esq., while the prisoner was defended by J. T. Brady and D. Graham, Esqrs.

After the summoning of the jury, which was completed with much difficulty, Mr. Philips opened the case as follows:

"The time which has been occupied in selecting you as the arbiters who are to decide upon the guilt or innocence of the accused, has not been misspent, since it has secured to her a jury which may emphatically be said to be one of her own selection, who will patiently listen to the evidence in the cause, and who will pronounce their verdict with fearless and firm impartiality.

"To such a jury no caution is necessary; I have that confidence in your intelligence and integrity which assures me, that while you will accord to the prisoner all the rights which the law guaranties to her, those of The People will be maintained with equal fidelity; the supremacy of the laws will be vindicated; and if the evidence satisfies you (as I cannot doubt it will) of the guilt of this defendant, the community will no longer be cursed with one who, disgracing her sex, forgetting that she is herself a mother, disregarding at once divine and human laws, has amassed a fortune in the daily perpetration of a crime which violates and annuls one of the most sacred ordinances of Almighty God.

You will be told that you must discard from your minds all prejudices unfavorable to the prisoner, growing out of the peculiar position she has held in this community. Useless precaution to men like you! right-minded men, who will never permit their abhorrence of a crime to influence their decision as to the guilt or innocence of those who may be charged with its perpetration.

"The holiest spot in the Temple of Justice is the jury-box; sympathy, prejudice, or passion cannot enter it; ye are then withdrawn from the world and all its external influences, the stern, honest and inflexible ministers of Justice, whose decision the guilty alone await with terror and apprehension, but to whom innocence ever looks with confidence and never-dying hope.

"The duty which devolves upon me in conducting the prosecution of this cause is simply to narrate the facts, an investigation of which, by the Grand Inquest of the country, has resulted in placing Ann Lohman, otherwise known as Madame Restell, upon her trial, on a charge of manslaughter in the second degree, for having on the 19th of July, 1846, produced an abortion on the body of Maria Bodine, she being then pregnant with a quick child, and thereby producing the death of such child. This indictment is founded upon the Act of the 4th of March, 1846, having read which, I will state, with as much brevity as perspicuity will admit, the facts which the prosecution wish to establish, by the most conclusive evidence, and upon which we shall ask you to pronounce this woman guilty.

"(Mr. Philips then briefly presented the main facts in the case, which will be found in the reported testimony.)

"The heart sickens at such a narrative. Nature is appalled, that woman, the last and loveliest of her works, could so unsex herself, as to perpetrate such fiend-like enormities.

"The gardener watches with jealous care the seed he casts into the fertile earth, until it germs, and buds, and blooms, in the consummated perfection of nature's loveliness. But this defendant destroys the germ of nature. She kills the unborn infant; endangers, if she does not destroy, the mother's life, ruins her health: and all for the sake of the base lucre, which she allures the frail or wicked, who have fallen, to pay her, in the vain hope that she can aid them to conceal their shame. It is for you as jurors, husbands, fathers, and brothers, to say, whether these monstrous crimes are to continue; whether God's laws, and those enacted for your safety and protection, are to be violated with impunity. The community look to you for a fearless, firm, and faithful discharge of your duty. In this behalf, the progress of this cause will be watched with intense and anxious interest by your fellow-citizens.— A sacred and important responsibility has devolved upon you, the sworn conservators of their peace and their security. The spirit of truth will guide and control your deliberations; and so directed, the result will be such as your consciences can safely rest upon, and the public voice approve.

"The complainant, Maria Bodine, here came into Court with a feeble, tottering walk, and took her seat in the chair usually occupied by witnesses. She is a young woman, about 26 years of age, middling size, and evidently in a rapid decline of health. She was neatly dressed, and her appearance created much excitement and sympathy throughout the crowded court-room.

The witness then went on to state the fact of her pregnancy, her coming to New-York, interview with Madame Restell, etc. Madame R. informed her that her price was five dollars for examination, and one hundred dollars for *operating;* that she had pills, at one dollar and five dollars per box; said it would be a very expensive job; etc., (here the witness fainted, and on being brought into court again, her counsel "insisted on her speaking loud enough to be heard by the jury, and that her answers should not be repeated by the district attorney or other of her counsel." This was, however, overruled by the Court.) Miss B. afterwards stated that Madame R. refused to *operate* until she had paid her seventy-five dollars, which she did; she then proceeded to testify as follows:

"We went up stairs; Madame Restell took the pillows off the bed, and directed me to lay on the floor, right down; I did so; she said she wanted to make an examination, to see how far I was advanced; I lay down as directed, and for five or ten minutes with her hand she made an examination; she inserted her hand up my body, in the vagina; (in a whisper, but audible, and repeated by Phillips). She hurt me very much, and I made loud groans. The reason she was so long, she said was, that I was differently situated from any one else; she could not find the right direction; she turned her hand round in my body as if she was breaking something; the operation continued from five to near ten minutes; I did not all the time lie on the floor; I got up then and sat on a chair; she told me to take a pill three times a day; she left five or six pills; I took them as she directed for two days; she left the room, but I don't recollect whether she turned the key; I was very much distressed indeed; I had my *courses* while she was in the room, and I noticed it on her leaving; I saw her again that afternoon, and told her what had occurred; I said to her I saw my courses; Madame Restell said it was nothing; I should see a little until I went through the operation; she came to me in the evening, and brought me a glass of water and a light; she said she did not think I should need her that night, but if I did I must ring the bell. Next morning, Monday, I saw Madame Restell about seven o'clock; she asked me how I was getting along; I said not first rate, as I am much distressed; I was much distressed; she said, the pills were taking effect; I felt getting worse and worse; she continued to visit me occasionally through the day; that evening, Monday night, Madame Restell slept with me; I was in great agony all the night; in the morning, Tuesday, about daylight, I took a great flooding; I had been very sick at the stomach and vomited; during the flooding she bade me get up out of the bed, and she jumped out; she told me to sit down on a stool; an earthen chamber, narrow at the bottom and broad at the top; whilst seated there, I suffered violent pain, and Madame Restell inserted her hand in my privates, and said it would make it easier for me; it gave me more pain; every pain I had I heard something fall from my body into the stool or chamber; I told Madame Restell of it; she said. be patient; one more pain and I would be through. Q. Was there anything peculiar in *the last* pain? A. I thought I was at stool, straining; I don't recollect exactly how long I might be on the stool, perhaps five minutes; I then got on the bed, as she bid me; Madame Restell again inserted her hand; she hurt me so, I hallooed out and gripped hold of her hand; she told me to have patience, and I would call *her mother* for it; she did not say anything at that time more particular in reference to my pain; when I again told her, she said my pains were *after*-pains. Q. Did you ever see, Maria, what came from you? A. No, sir, she would not let me see it. Q. Did you ask her to let you see it? A. I did, but she said it was not worth while; she would not; and she put it behind the fireplace, saying she would remove it at night; Madame Restell attended me during that night; I remained at her house till Thursday afternoon; I had crackers and tea, the first day, then afterwards some vegetables and soup. On Thursday afternoon she came into the room and found me crying; she asked me what was the matter; I told her I wanted to go home, but I had no money to go with; if I wished to go, she said she would give me money to pay my passage and get some refreshments; she gave me a dollar; my passage-money was six shillings; she then took me down into the parlor and gave me some wine; she then said she would listen and look around to see if any officers were about; she looked out and said there were not; she said if any one arrested or accosted me, I must return to her, and I should go in a carriage; she said I must say nothing to any one about what had been done; if I told, she said we should both be liable to the state prison, as I had no right to go there, and she had no right to give me medicine, *or to do it.* My breasts pained me very much, and milk came from them over my dress; on telling her, she said, if they troubled me much, I must wrap them in red flannel, and rub them with camphor; she said, I was to draw them out with a smoking-pipe. I left Madame Restell's about three or four in the afternoon; she shook hands with me on parting, *gave me a kiss*, and told me I must never do so again; I then left. Q. Before going to Madame Restell's, had you any sensation peculiar about your stomach? A. Before and about the 17th of July, I had different sensations from what I ever felt before; my breasts were swelled, and my bowels, and I felt something flutter in my womb. Q. What was the condition of your health after leaving New-York and returning to Ramapo? A. I walked to the boat; it started a short distance from her house; I was in very, very great agony, all the while *a flooding;* the flooding continued for five weeks; after I got home my health was very bad; lumps of something like flesh or liver came from me as large as a hen's egg, and larger; I left Mr. Cook's, at Ramapo, and went to my sister's, Mrs. Youngblood, at Walden, in Orange County; this was about the 1st of September; the discharge continued to come from me whilst staying at my sister's, and *from the same cause;* I was confined to my bed for four months at my sister's; I was under Dr. Evans' care at Walden for the same cause; was flooding when he came to see me, the third day after my arrival at my sister's; other physicians visited me also; Dr. E. brought with him Dr. Martell, and also Dr. Governeur, Dr. Lewis Moore, and Dr. Thos. Moore; and Dr. Samuel Smith visited and attended me; Dr. E. attended me three months; the others about two months; Dr. Smith attended me from last April to last August; my sister's name is Maria Youngblood; her husband died about a month ago; I was constantly under the care of a physician from the time I left New-York for Ramapo to August, 1847. Q. Maria, what is the present condition of your health? A. My health is still feeble; I have constant distress in my head; pains; falling of the womb; weakness in my back; burning in my hands; weakness and trembling all over me.

"The Court adjourned a little after three, without concluding the direct examination. The witness, pale and agitated, was assisted by an officer from the stand, and left it with feeble and faltering steps, evidently laboring under severe pain about the spine and loins."

On the next (5th) day, the direct examination was continued, but nothing important elicited. In the course of the examination, the report introduces us to the following *scene.*

"Q. Had you ever had intercourse with any other person before you had with Mr. Cook?

"*McKeon.*—This is one of the questions which the witness may or may not answer. But, I advise her to answer.

The question repeated. The witness declines to answer.

"*Brady.*—This woman had for years, constantly and habitually, indulged in habits of prostitution, and she *shall* answer.

"*Recorder.*—The Court is bound to protect the witness.

"*Brady.*—No mawkish sensibility here. This woman is guilty. We have no sympathy for her, but shall use her as we think proper. She is the felon, the instigator, the prompter. The defendant had requested her to wait her time. She would not. I shall show that the pretence that Mr. Cook *ever* had intercourse with her is false and abominable. She never was pregnant. She had for years been accustomed to have free promiscuous intercourse with men. That witness is guilty as much as the accused, and ought as much to be tried.

"*McKeon.*—I don't pretend to have a virgin upon the stand coming from Restell's house. It is an impossibility, and we do not pretend that she is a woman of immaculate character; but it is contrary to all law and all decency to criminate the witness to the extent attempted. It is not true, and I am correctly instructed as to her real character. It is not true.

"*Graham* argued the point. Her present state of health, to which the District Attorney alluded yesterday, is caused by a long course of intemperance, a constant career of prostitution, and is the natural consequence—not of Madame Restell, but of habitual and promiscuous intercourse as a harlot—not with Mr. Cook, but with every man, every hour, or every five minutes of her life.

"Here, in the midst of Graham's argument, the witness became overpowered by sickness, and was obliged to be withdrawn from the stand by the attending officer. It was with difficulty she was prevented from sinking on the floor.

"*Graham.*—I insist that the Court compel the witness to answer this question.

"*O. Hoffman*, replied.—We say the testimony is not relevant. The question is not as to her character, but whether an abortion was produced by the instrumentality of this woman, Restell.

"*Recorder.*—The Court decide that the witness may decline to answer this question; you have no right to compel her, if she refuse or decline, on the ground that it would tend to disgrace her."

The cross-examination of this poor girl was continued through two entire days; but as to the manner and the spirit in which it was conducted, we shall not trust ourselves to speak. If professional laurels, or the riches of Crœsus, are to be won in such a way, we envy them not. After a long series of questions, which, if a tithe of them were believed, would have rendered the witness herself more guilty than the miscreant culprit herself; and which questions, moreover, were wholly unsustained by the evidence afterwards brought forward, we are informed that—

"The witness here again fainted through absolute exhaustion. She was led or supported out of court. She fell, through physical inability to sustain herself against so stringent and searching a cross-examination for the purpose of shaking her testimony.

"In a little over half an hour, the witness, Maria Bodine, was returned to the stand, but still deadly pale, and her lip quivering with emotion."

This was the third time that this girl fainted from exhaustion and mental excitement; and yet, on her being returned to the stand, Mr. Brady persisted in the same line of examination, insisting, among other things, that she should state whether she had had sexual intercourse with any other person than the individual implicated, between July 1846 and April 1847, which was very properly *again* ruled out by the Court.

Dr. S. C. Smith of Montgomery, Orange Co., was the first physician who was called to the stand. He testified that he was called to attend Maria in May, after her return from New-York; that he found her in a delicate situation, with constipation of the bowels, pain in the head, inability to move, and a very feeble pulse; complained of difficulty about the womb; on examination the womb was found distended by some foreign substance, with slight prolapsus; the *os* indurated, and painful to the touch; with a discharge, etc.; and that he came to the conclusion that she must have had a delivery of a child badly managed, or had an abortion produced upon her by some mechanical injury by an instrument, or by violence of the hand.*

The testimony of Dr. Smith is, on the whole, creditable to his intelligence; we quote what was offered on the subject of quickening.

> "*Mr. Brady*.—Is there any sign or symptom by which any physician, before the fœtus has life or the woman quicken, can, with certainty, determine? A. There are certain symptoms from which we infer, but there is no certainty but quickening. Q. Cannot all these symptoms result from suppression of menses? A. There are such cases on record. Q. What do you mean by quickening? A. The motion of child or fœtus in uterus. This flutter cannot be felt from a mere change in uterus. Q. What cause does the fluttering spring from? A. I think there is no cause to be assigned. Q. At what period does quickening occur? A. Sometimes 12 weeks, up to 6 months. Q. What author says 12 weeks? A. I don't know; if I did, I would inform you. Q. At what period could you, by stethoscope, ascertain the quickening? A. At 12 weeks the pulsation can be detected by auscultation. The fluttering may be mistaken for wind or flatulence, and it is very unreliable or unsafe as a symptom, and a woman may be mistaken. Q. Had you ever a case where a woman supposed herself in labor, and was not pregnant? A. No, sir. Q. If a woman first misses her courses on May 13, could she have become quick with child on July 17? A. From missing the courses she could not be certain; but my opinion is, she could be quick. Blisters, cupping, and other counter-irritants, are applied, in cases of disease of spine; but for what I knew to be an abortion, I should not use, myself, such means."

We present, for want of space, only the testimony of Professors Gilman and Bedford.

> "*Dr. Chandler Gilman*.—I am a medical practitioner of 20 years or more. I am a professor of obstetrics, or midwifery. My studies lead me particularly to cases of midwifery. Q. Does menstruation ever occur after pregnancy? A. Yes, sir. Q. Is the fact that a woman has courses distinct evidence she is not pregnant? A. There are instances of women having their menses up to confinement. There are instances on record where women have quickened at three months. Q. What is most decided evidence of pregnancy? A. Placing your ear on the abdomen, and hearing the beating of the fœtal heart. Areola is very strong and almost decisive evidence. If it exist in the case of an unmarried female, I should feel compelled to give my opinion against her. Q. If you found this areola, how far would you suppose she was gone? A. As early as 12 weeks.
>
> "*Hoffman*.—From Dr. Evans' statements, what would be your medical opinion, as he described them? A. They would indicate that she either then was pregnant, or had recently been delivered. That she had been delivered within quite a short period. I should think this girl had had an abortion. Suppressed menstruation would not account for such symptoms. The ordinary time of quickening is about four or four and a half months.

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* It is due to Dr. Smith to state, that it was owing to his exertions solely that legal proceedings were commenced in this case, and that such testimony was adduced as to convict the prisoner. The other physicians examined were Drs. Geo. Coles and Edwin Evans; Professors Gilman and Bedford; Drs. Archer, Pratt, C. D. Smith, Covel, P. A. and S. Millspaugh, Putnam, Wilkes, etc.

" *Brady.*—Doctor, if a woman was 25 years old, and in good health, who had never missed having menstruation, would she be quick with child? A. In the ordinary course of nature, she would not be; the deep color of the areola in a woman who has had children, always remains; it cannot be produced by obstructed menstruation, according to the accredited opinion of well-informed medical men. The open state of the womb would continue for many months Q. Had this woman been delivered, from the symptoms? A. There was nothing more than a probability that she had been delivered by violence, but a certainty that she had borne a child, and been delivered of a child. The insertion of the hand into the vagina, and certainly the insertion of the finger into the mouth of the womb, would produce abortion by rupturing the membranes. Q. What are the effects of abortion? A. Discharge of clots and masses of blood, with very great pain in small of back and lower part of belly; uterine pain might cause her to vomit; the shock to her system might, or might not, produce rigors or chills, and the violence might produce fever with the ordinary symptoms; subsequently continued discharges of blood in larger or smaller quantity, sometimes very considerable; the burning in palms of hands is one symptom of irritative fever; the opening of the womb to the size, say of a shilling, would indicate that she had been delivered; I have known it continue 6 weeks, and there is no reason why it should not continue for 6 months or a year. Q. Independent of all other symptoms, would you or would you not, form a decision and opinion, that a woman with these symptoms had been pregnant? A. I should feel compelled to say she was pregnant, even if she were an unmarried woman.

" *Cross-examined.*—Does menstruation ever continue during pregnancy? A. Every gentleman who has practised medicine knows many instances.

" *Dr. Gunning S. Bedford*, called.

"*Examined by O. Hoffman, Esq.*—Q. You are, I believe, Doctor, a professor, and well known in the profession. You hold in the University a similar situation with Dr. Gilman in the rival College? A. I occupy the chair of Obstetrics, including the Diseases of Women and Children, the same department as is filled by my friend, Dr. Gilman. This has been my particular study, and subject of attention.

" Q. Doctor, can a woman menstruate after conception? A. A woman can be pregnant, and yet menstruate. Q. After conception, at what period generally does menstruation discontinue, or rather does a single menstruation prove at all she is not pregnant? A. It does not at all. Q. What is the ordinary period when a woman quickens with child? A. In answering that question, I beg to say that physicians consider that life is perfect in the earlier months, the earliest in fact of pregnancy, and that the child is as much alive then, as at any subsequent period.

"*Brady*—Yes, but lawyers do not; there is a distinction between what you regard as life—natural life, and *legal* life.

" *Dr. B.*—I wish distinctly to be understood, and to state only facts, and well-received doctrines, as I know I am reported. Q. You are right, sir! I now renew the question. A The general rule is, that women quicken at four, or four and a half months; women will sometimes quicken at three months, and such is the difference as regards the time, that it is an accepted doctrine with the profession, that from ten to sixteen weeks are the two limits within which quickening can or will take place. Montgomery is the best writer on this special subject; the old general rule of four months has a multitude of exceptions, and they are so numerous as almost to swallow up. Q. Do you know Dr. Evans, and if so, what importance would you attach to his opinion? A. What is his christian name? Dr. Edwin Evans. A. Yes, I do; he graduated with great credit at our University. [Looking round.] Yes, there he is in the crowd; he was a very respectable and talented student. Q. Is the areola considered by standard writers an evidence of pregnancy? A. It is considered as the most striking evidence; it is regarded by the best authorities as the most distinct and special evidence, so much so that I will briefly relate an anecdote from the celebrated Dr. Hunter.

"Dr. Bedford here related a singular anecdote recorded by the celebrated Dr. Hunter, who affirmed respecting a certain subject in his Dissecting Rooms, a young lady, whose bosom presented the areola most distinctly marked Dr. H. asserted, that she had been or was then pregnant, though during life she was regarded strictly as a virgin, and also the membrane, called the hymen, was not ruptured. Dr. Hunter's diagnosis on this most improbable case turned out perfectly correct, as the young female, on examination, proved to be *enceinte*, and a child existed.

"Q. Dr. Bedford, can you depend with confidence upon this areola? A. We can rely with almost absolute certainty upon it when distinctly marked; it usually shows itself about the fourth month of utero-gestation.

"*Dr. Bedford.*—I here wish to remark to the Court and Counsel, that I have read no testimony in this case; I give my opinion quite abstractedly and irrespective of anything which may have been previously said.

"Q. Doctor, would the mere suppression of the menses, unaccompanied by pregnancy, ever produce this distinct appearance on the breast? A. Certainly it could not produce the full and distinct appearance. Q. When does this mark or areola leave the female? A. It never entirely disappears; the breast never perfectly assumes its virgin color, but the areola diminishes after delivery; the cause of its existence having ceased, the effect declines. Q. Supposing a woman to have been pregnant, and abortion to have been produced, what would be the immediate effects of this violence? Describe, if you please.

A. It would depend on the degree and manner in which the force had been applied. In an abortion generally, as it happens, the pain would be about the same as in natural labor. The womb contracts upon the expulsion of its contents, and if rudeness or hasty violence have been used, it rapidly contracts, a discharge of blood comes on, sometimes most fearful, for abortion is almost always succeeded, or accompanied, by extraordinary flooding. This hemorrhage, or flooding, would be greater or less, according to the age of the fœtus. A woman in early pregnancy will flood more than a person further advanced. A female who is two months gone, and aborts, would have heavier flooding than one five months advanced. Q. What would be the character of the discharges after abortion? A. At the first gush, fluid; then it would be clogged, coagulated, a soft red mass in clots, and undoubtedly there would be an after-birth, of course. If much force were used, and an abortion procured by violence, the after-birth might come away entire, or in shreds; it would depend on circumstances, but most likely it would come away in shreds, fragments, separate pieces. and it only comes away entire when nature is properly assisted. If the after-birth were retained, it would decay, liquefy, become putrid, offensive.

"*Hoffman.*—What substance would the clots you speak of most resemble, that you can recollect? A. The liver that you see in market cut up in lumps. would resemble this closely; but the after-birth would be more friable. Q. If a woman was delivered by this operation, say on a Sunday, or rathe. on the Tuesday, would she be fit to go on a journey on Thursday, and then go about her regular house-work; or rather, to complete the question, how long would the flooding. in such a case, probably continue? A. I cannot define any period when it would terminate; it would run on, sometimes lessening, then recurring, until it destroyed life, if not arrested by proper medical treatment.

"*Cross-examined by Mr. Brady*—Dr. Bedford, you edited, I think. an edition of Chally's Midwifery, some three or four years ago, and there have been recent editions of this book; now in that work is the areola mentioned as an infallible sign? A. I have not mentioned it as an *infallible* sign, but the best accepted writers regard it as a strong evidence of pregnancy. In fact, Mr. Brady, if I were to see a female, whether married or not. and I noticed on her breast such an areola as described, with papillæ distinctly developed around it, I should care for no other opinion, and regard no other testimony; I should say, decidedly, she was pregnant. The appearance could be produced by no other cause whatever. Q. Doctor, there is a disease which you call dysmenorrhœa, which I understand is difficulty of menstruation: does that ever produce a change? A. It sometimes does, but the appearances are widely different. Q. What do you think of "Kennedy on Auscultation in Pregnancy"? A. Why, it is a respectable work, but I would rather not be asked an opinion unless I can praise highly. I thought Chally well adapted for the ordinary practical details of the lying-in-room, a good elementary work as a companion, or I would not have edited it for my pupils; but I do not regard it as the highest standard work. Q. Now, what do good authors state as the shortest time of quickening? A. The accepted authorities state numerous cases where it has occurred at the expiration of the third month. Some instances have happened of quickening at ten weeks. Every practical man who is an accoucheur knows of them. Q. When a woman has been pregnant three months, how much open is the mouth of the uterus in her first pregnancy? A. It depends on the constitution, and the relative size of the individual. The os tincæ would vary according to personal conformation. Q. Could any force break through the glutinous secretion with which it is closed? A. Force can accomplish anything if the heart will direct it; but the effects of any—the least interference—are sometimes dreadful. The insertion of the finger upon the part, and merely titillating the os, will in some cases produce abortion. In my opinion, the mere introduction of the hand into the vagina would produce, in a nervous, sensitive, excitable, or even ordinary temperament, hysterics, convulsions, it might be, death. Really, I ask any gentleman of common sense, to decide upon that question; it does not require a doctor. But a woman having had constant or frequent intercourse with men, might escape the abortion as produced by the introduction of the hand; the parts would not be so rigid or sensitive as in a more virtuous woman. Q. Suppose a woman was subjected to an abortion on Sunday, how soon would the fœtus be discharged? A. It depends on the degree of force employed, the actual progress or completion of the attempt. It may be in 10 hours, or 20, or 36; it may even be shorter than 10. Sometimes the womb would be thrown into contraction immediately, and abortion prove instant. The fœtus would come away at once, unless it had been destroyed; then it would come away in fragments, shreds, or piece-meal. The after-birth would follow, sometimes in half an hour, sometimes in three or four hours; but if its expulsion were long delayed, putrefaction would occur. The after-birth would come away slowly, in a putrified, offensive state, or there might be flooding, which would terminate in coagula. The female might have this dribbling—draining of blood—for months and months, and then it would destroy her at last, if proper medical means were not used to arrest it. Q. If the after-birth were so long retained, how would it at last be disposed of? A. It would come away in a liquid state, as I have said, wasted; a deciduous membrane, something like wet blotting-paper, is sometimes thrown off in difficult menstruation.

"*By Hoffman.*—Q. Would the facility of entering the vagina, or the womb, increase according to the advance in pregnancy? A. Certainly—but the danger would increase too. Q. Supposing the hand were introduced and worked round and round, *so*, as has been described, what would be the effects? A. The most horrible. Q. Could a wire be under the finger at the time of such an operation? A. *Undoubtedly, that's the way the thing is done!* [Great sensation throughout the Court.] Q. Doctor, at what period in gestation does a woman's size begin to alter?—Truth is our object, and we must endeavor to attain it, by every inquiry. We are all *groping* in the dark—

"*Graham*—(interrupting.)—Yes, Mr. Hoffman, but we must *grope* according to *law*.

"*Answer by Dr. Bedford.*—Very soon after pregnancy. Some females will have the appearance of pregnancy as early as three months. It depends upon the make, the conformation, and general physical causes.

> "*Graham.*—According, of course, as the clothes fit.
>
> "*By Hoffman.*—At what period, then, does the rotundity of the figure increase, so as to require a female to unhook her dress?
>
> "A. That does not fall exactly under my department. But there is undoubtedly a change in rotundity so early as the third month."

The medical testimony offered on the defence, we regret to say, was not such as to do any great credit, either to the individual witnesses, or the cause of medical science.

The defence set up that the principal witness, Miss Bodine, was laboring under venereal disease at the time, and was an abandoned, dissolute girl, failed in every particular. And yet the counsel, Mr. Brady, thus spoke of her in his opening speech:

> "And this woman, the prosecutrix, it will be our solemn duty to prove, and we have facts to sustain us in the assertion, that that woman is as foul, corrupt, loathsome, guilty thing, as ever polluted God's blessed earth by her pestilential presence.
>
> "This girl was ill of a disease about which there ought to be no mawkish sensibility in giving it its right name. I have the physician to produce who attended her for it, and the messenger who carried the medicine. She was then laboring under the effects of the malady. She had ulcers in her throat, and sores upon her person. She utters in this Court a direct and brazen falsehood. She has upon that stand committed a deliberate perjury, when declaring her freedom from foul disease. I am instructed to say and to prove, that at an early period of her life, she gave herself up to this licentious course of general and promiscuous concubinage; and so precocious was she, that at a very early term of comparative youth, so thorougbly corrupt and abandoned had this girl become, that she had destroyed her health, her character, and her family reputation.
>
> "Our evidence will be abundant and overwhelming. Every material fact in her statements will be contradicted by the most respectable, the most irrefragable testimony; and I will hold her up before you, on the sternest testimony, begrimed and blackened with every enormity that can degrade or vilify woman."

We have read the trial, but we find no such testimony recorded.

The prisoner, as is well known, was found guilty, and sentenced to one year's imprisonment in the Penitentiary.

On one point, we feel disposed to venture a remark. We have already alluded to the extraordinary course adopted by the counsel for the prisoner. In justification, Mr. Brady, in opening the case for the defence, thus spoke:

> "As regards the performance of my duty to those who confide to me the defence of their freedom, property, or reputation, I at once and without hesitation say, that as Counsel, I make the case my own. Their interests, their success, are incorporated, identified with mine. My client is myself. This is no new doctrine for Counsel to advance, no new principle for the bar to defend.
>
> "In the language of that great and distinguished lawyer, Lord Brougham, a man whose equal the world has seldom seen, as regards profound sagacity and lofty universal talent, I believe that Counsel when retained, and a case committed to their trust, know then but that one person in the world; and the only office, the sole single duty they have to perform, is to protect that person at all risk, all sacrifices, all hazards. In that celebrated case, the trial of Queen Caroline, (from which Mr. Brady quoted a splendid passage,) that is the language employed by the greatest man of the age, as scholar, jurist, and universal genius. His doctrine I adopt, and with him (though treading in his footsteps at an immeasurable distance,) I am content to err.

According to my feeble capacity, I will defend that lady with the whole of my energies, and at all hazards. I am here as the advocate and friend of that woman in the hour of her misfortune and the day of her adversity, to secure for my client a fair and impartial trial, and to obtain for her that acquittal to which she is undoubtedly entitled. For what cause is the accused put on her trial this day? It is not for one crime, it seems, but for a series of crimes. She is in fact dragged here to answer for all the past transgressions of her life: and the jury are called to pass not upon this single indictment, but upon other alleged iniquities, and to give a verdict not upon any one individual act, but upon her deeds and actions for the last ten years."

We have a high respect for Mr. Brady, but we have no respect at all for the principle here laid down,—we care not, whether Lord Brougham or any other Lord defend it; we are ready to show that it cannot stand, when regarded in the eye of justice, or of morals. "When counsel is retained, then," says Mr. B., "the sole single duty they have to perform, is, to *protect that person, at all risks, all sacrifices, all hazards.*" But, by what law, human or divine, is any man compelled to defend the guilty? By what code of morals can he attempt to screen the latter? We allow it is a noble, a divine thing, to defend injured innocence, to protect the weak, and the oppressed, when unjustly accused. But where, we ask again, will Mr. Brady find his argument for declaring the guilty to be innocent, and thus pledge his character for veracity to shield the blood-encrimsoned abortionist, whose foul offences cry to heaven for vengeance? If this doctrine, and the practice which grows out it, does not lead to the increase of crime, then it is difficult to conceive what circumstances would. Mr. B. speaks of the conviction of the prisoner as a "misfortune," and expresses the belief, that she ought to walk forth from the trial, "*innocent, perfectly innocent* of the offence alleged, with *reputation unstained*, and *character unblemished!!*" If such is a specimen of the manner in which the *guilty* are to be *defended*, and *innocent witnesses punished*, then farewell to all hope of deterring future Restells, and Costellos, from treading in the footsteps of their much-injured, and "innocent" predecessor!

In conclusion, we are persuaded that these rules of action, as laid down by Mr. Brady, cannot be sustained by any arguments possessing the slightest weight whatever. They are not the rules which regulate the practice of the strictly conscientious lawyer, however they may be bolstered up by the opinions of high legal authority. If the profession of the law be well calculated to subserve the ends of justice, it is only when administered with fairness, honesty, and impartiality; by presenting, in their full force, all arguments in doubtful cases, leaving them for the judge and jury to weigh, and consider. We see no necessity for violating the limits of truth and justice, even in defending such a vile miscreant as Madame Restell; there may be arguments in her favor, or possibly justifying or palliating circumstances, deserving consideration, testimony to be scrutinized and sifted, etc ; but this does not oblige her counsel to express their solemn conviction that her cause is just; that she is an innocent, persecuted woman; when they honestly believe the very reverse. An advocate who should take this ground, would doubtless err as much against truth and righteousness as any other man who should make the same assertions. Can any man believe that such a course, now so often observed in our civil and criminal courts, can possibly answer the great ends of justice, and morals? Are not lawyers, like all other men, *moral agents;* can they put off this character, by putting on a professional one? If not, are they not bound to be truthful in all their statements, and sincere in all their pleadings and exhortations? Are they not, like the physicians, and all other men, bound to use their moral character for moral ends? But do they do this, when they aim to bolster up the bad cause of their clients, by making moral subservient to professional ends,—selling themselves, soul and body, to their client, as well as their learning and skill? We have supposed, that the obligations to be good men, and true, were more imperative, than to be successful lawyers. But it seems we were mistaken. We deem these remarks not out of place, because we have seen so many instances, of late, where these principles have been grossly violated. Again, and again, has this guilty woman, as well as others engaged in the same nefarious business, been arraigned for the same offence; but the meshes of the law became large enough, through the ingenuity of counsel, to serve as loopholes of retreat, and they passed from the criminal court into their splendid coaches, with all the airs of triumph and exultation which belong to injured innocence when escaped from peril. They have gone on, year after year, glorying in their shame; defying the law, outraging decency, and laughing at morality; well knowing that the best talent, skill and learning of the bar, were always at their service. For years, our municipal authorities have had police officers stationed before the door of this atrocious *pregcatrix,* warning the unwary and the beguiled from her deadly precincts; the press has teemed with warnings against her practices; the medical profession has done its utmost to bring her to justice,—but she has found her safety thus far in the ingenuity of the bar: this has been her shield and protector; her faith in the omnipotence of money was firm and unshaken. How has *she* beguiled the legal profession? as one designed to promote the great ends of justice, and morality? We trow not! These remarks are made more in sorrow than in anger. To a large majority of the members of the bar, we believe they will not apply; we look upon the legal profession as designed, and eminently fitted, to promote good morals, and the best interests of society; and we hold moreover, that it may subserve all the ends of justice, without demanding, on the part of an advocate, the slightest insincerity, or violation of truth. Certain we are, that it is only when practised in subordination to moral ends, that it takes rank among the noblest and most honorable occupations of man.

Art. XIV.—*A Medico-Botanical Catalogue of the Plants and Ferns of St. John's Berkly, S. C.* An Inaugural Thesis for the Degree of M. D. in the Medical College of South Carolina, etc. B. F. P. Porcher, Charleston, 1847, (8vo. p. 55). [Prize Essay.]

This is an exceedingly creditable performance, as an Inaugural Thesis, and is the result of a vast deal of labor and investigation. We have first presented "*A Medico-Botanical Catalogue of the Plants and Ferns of St. John's, S. C.*" occupying 34 closely-printed pages; and then "*a Catalogue of Phænogamous Plants and Ferns, native, naturalized and exotic,*" growing in the same region. The plants are arranged alphabetically, instead of being grouped under the natural orders, as we could have wished; although each method undoubtedly has its advantages. The Bibliographical references are very full and complete, and enlarge much the value of the essay. There are some points, perhaps, open to criticism; but, on the whole, the production is characterized by great accuracy and judgment. We trust that other medical students will follow the example of Dr. Porcher, so that, ere long, we may have complete catalogues of the plants growing in various locations, in every State and Territory of the Union.

Art. XV.—*Chemistry of the Four Seasons: Spring, Summer, Autumn and Winter.* An Essay, principally concerning Natural Phenomena, admitting of interpretation by Chemical Science, and illustrating passages of Scripture By Thomas Griffiths, Professor of Chemistry in St. Bartholomew's Hospital, etc. Lea & Blanchard. Philadelphia, 1846, (8vo. pp. 450).

This is one of the most entertaining scientific works with which we are acquainted; all the phenomena connected with the four seasons are explained and elucidated in accordance with the facts and laws of chemistry, so that a person altogether ignorant of this science could scarcely adopt a better mode of becoming initiated in its principles than by a careful study of this treatise. "Chemistry," in the language of Davy, "is a science which has its moral and intellectual, as well as its common uses; its object is, not only to apply the different substances in nature for the advantages, comfort and benefit of man, but likewise to set forth that wonderful history of wisdom and intelligence, which is written in legible characters both in the Heavens and on the Earth." It is a work of special interest to medical students, as well as those engaged in the practice of medicine; it abounds in interesting and useful information to the general reader, while its experimental illustrations are of the simplest character, and do not involve the necessity of costly apparatus.

PART THIRD.

American Intelligence and Editorial.

Action of Medicines.—Professor Blake, of the St. Louis University, has published a valuable paper in the Nov. Number of the St. Louis Medical and Surgical Journal on the subject of the Action of Medicines, containing the results of numerous experiments, made during the last few years. The principal objects which Dr. B. has aimed to ascertain are, "whether medicines act by being taken into the circulation, or whether they produce their effects by impressions made on the nerves of the part to which they are applied, which impressions are capable of strongly modifying the functions of the nervous centres, and by this means re-acting on the whole system?" Another question which he has attempted to solve, is, whether "when a substance is absorbed into the blood, do the re-actions it gives rise to, depend on the chemical properties of the substance used? or in other words, are the re-actions between the elements of the blood and tissues and inorganic compounds, governed by the same laws when taking place in living animals, as they are when these same elements are mixed together out of the body, and no longer forming a part of the living organism?" With respect to the first point, viz.: the absorption of medicines into the blood, before acting upon the system, after stating the opposite views entertained by physiologists on this subject, Prof. B. states, that a carefully-conducted series of experiments has convinced him, that an appreciable interval of time always elapses between the application of a poison to a mucous surface, and the appearance of the first symptoms of its action, the interval varying in different animals. For example: half a drachm of anhydrous hydrocyanic acid, applied to the tongue of a large dog, produced no effect until *eleven seconds* had elapsed; the respiration then became affected, and the animal was dead in *thirty* seconds from the time the poison was introduced. When the animal was made to respire through a tube introduced into the trachea, a longer interval elapsed between the application of the poison to the mouth, and the appearance of the first symptoms of its action, owing, in the opinion of Dr. B., to the poison having a longer distance to go before reaching the brain; "for," he observes, "owing to the great volatility of the thing, hydrocyanic acid, it is instantly converted into a vapor on coming into contact with so warm a surface as the mouth; it thus becomes inhaled into the lungs, and is there absorbed by the mucous surfaces, and reaches the brain through the pulmonary veins, the left cavities of the heart, the aorta and carotids; whereas, when it is prevented from entering directly into the lungs, it has, in additiont o the above course, to pass down the jugular vein, into the right side of the heart, and through the pulmonary artery."

The difference in the two cases amounted, however, to only five or six seconds. The uniformity of this result would seem to establish very conclusively the correctness of the explanation above given.

In experiments with the alcoholic extract of *Conia* obtained from the seeds, Dr. B. found, on injecting a small quantity in solution into the femoral vein of a dog, that fifteen seconds elapsed before the slightest symptoms of its action manifested itself. The animal then became convulsed, and died in 30 seconds after the administration of the poison. This experiment was repeated four times, and in no instance did any symptoms appear in less than 15 seconds.

Having procured some *Woorari* poison from Sir B. Brodie, Dr. B. injected five grains of it, dissolved in water, into the jugular vein of a dog; no symptoms of the action of the poison showed themselves until 20 seconds had elapsed, and the animal died in 45 seconds.

Strychnine was also extensively used by Dr. B. in his experiments; five grains in solution being injected into the jugular vein of a dog, spasms were first observed about twelve seconds after the poison was introduced, and the animal died in a minute and a half. The results of all the experiments on this subject justify the inference, that an interval always elapses between the application of a poison to any part of the body and the appearance of the first symptoms of its action; and, therefore, that there is no reason to believe that poisons ever act by a direct impression produced in the nerves of the part to which they are applied.

As the rapidity of the circulation differs considerably in different classes of animals, Dr. B. remarks, that "it is evident that, if a poison acts by being carried to the nervous centres through the medium of the circulating fluid, it must reach the brain most rapidly in those animals in which the circulation is quickest." He accordingly made experiments on the horse, dog, rabbit, fowl, and goose, using, for the most part, *Woorari* or *Strychnine*.

On the horse, six grains of Strychnine, injected into the jugular vein, produced the first symptoms of its action by slight twitchings of the muscles of the thorax, in *sixteen* seconds; in seventeen seconds the animal fell like a mass of marble, every muscle being in a state of the greatest rigidity; the animal died in tetanic spasms *four* minutes after the injection of the poison. When strong doses of concentrated hydrocyanic acid were poured on the tongue of the horse, no symptoms were perceived until after an interval of from twelve to seventeen seconds. It will be observed, that the time required for these poisons to act, when introduced into the veins, or applied to the mouth of the dog, was from eleven to twelve seconds, an interval of four or five seconds less than the time required to produce any effect upon the horse. In the *fowl*, the interval was still shorter; a grain and a half of strychnine, introduced into the jugular vein, producing convulsions in six and a half seconds, and in eight seconds causing the death of the animal.

In the *rabbit* the interval was only four seconds and a half, the animal dying in seven seconds; the hydrocyanic acid was found, in some instances, to act in less than four seconds, when poured on the tongue. These experiments on different animals were often repeated by Dr. B., and always with the same results. It it thus proved, that in different animals the interval varies that elapses between the time when a poison is applied to the tissues or mixed with the blood, and the appearance of the first symptoms of its action —it being sixteen seconds in the horse, and four and a half seconds in the rabbit. If poisons acted by an impression on the nerves of the part to which they are applied, they should act with equal rapidity on all animals, which is not the fact. The conclusions arrived at by Prof. B. are the following.

I. That an appreciable interval always elapses between the administration of a poison and the appearance of any symptoms of its action.

II. That this interval varies in different animals, being shorter or longer, according to the size of the animal and the rapidity of its circulation.

III. That the nearer the point at which the poison is introduced into the system is to the brain, the more rapidly are its effects manifested.

By another series of well-devised and skilfully-executed experiments, Prof. B. has shown that the time required for the blood to complete the whole round of the circulation in the *horse*, is about twenty seconds; in the *dog*, from ten to twelve seconds; in the *fowl*, six seconds; in the *rabbit*, four and a half seconds; thus furnishing a most striking agreement between the numbers furnished by the two series of experiments; an agreement so close as to render it impossible not to admit an intimate connection between the action of poisons, and the circulation of the blood; the periods of time, in fact, being coincident.

The paper of Prof. Blake is an extremely valuable one, and we hope he will favor the profession with the results of farther investigations connected with this important subject.

Medical Associations, Reform, etc.—The work of Medical Organization and Reform goes bravely on. Old Medical Societies are being revived and invigorated, and new ones formed where none existed before. During the last few weeks we have received the Constitutions and Proceedings of three new Societies, viz: one State and two District. They all enter on the work of cultivating Medical Science with an earnestness characteristic of the present day; and they all speak one voice in regard to Medical Reform, warmly approving of all the measures adopted by the late National Conventions. Indeed, the profession throughout our entire country seems to have become thoroughly awakened to the importance of elevating and advancing its condition in the great scale of human society. But it was our intention, at this time, to notice more particularly the organization of the "Medical Association of Southern Central New-York." This Association was organized in September last at Owego, in the County of Tioga. It is composed of "all regularly-educated Physicians and Surgeons, of good moral character, within the limits above specified, who shall unite themselves in the promotion of the objects of this Association."

The 'limits' referred to, are the Counties of Broome, Cortlandt, Chemung, Tompkins, and Tioga We will copy the Constitution and Regulations of this Association, for the purpose of making some comments which we hope may be of some benefit to those who may engage in the organization of other similar institutions. They are as follows, viz.: "Resolved, That it is expedient to organize a District Medical Association. Believing that the standard of Medical education is now too low, and as a consequence, that many are to be found in the ranks of the profession, who, although clothed with the doctorate, are disqualified for its high and responsible duties; and further, that our organization, duly perfected, may be conducted so as to speak, in its transactions, the united views and purposes of the Medical Profession, thereby rendering more efficient and available, the means for promoting true Medical Science; and for enlightening and correcting a distorted public sentiment, in reference to the healing art; and also, that it is necessary for emulation and concerted action in the profession; and finally, but not least, for securing a brotherly and friendly intercourse between all who are the commissioned agents of its responsibilities: therefore, be it Resolved, That this Convention organize a voluntary Medical Association, and adopt the following *Regulations.*

Art. 1st. This Organization shall be called "The District Medical Association of Southern Central New-York."

2d. The regular meetings of this Association shall be held annually, at such time and place as it shall from time to time direct.

3d. This Association shall be composed of all regularly-educated Physicians and Surgeons, of good moral character, within the limits above specified, who shall unite themselves in the promotion of the objects of this Association.

4. Physicians of reputable standing, evidence of which must be abundantly shown, beyond the mere possession of a license or diploma, who may wish to become members of this Association, can do so upon the recommendation of a member of this Association, by receiving a vote of three-fourths of the members present at any regular meeting. Medical Students of good reputation may, upon the recommendation of a regular member of this Association, be received, by the vote of three-fourths of the members present, but not be entitled to vote, or subject to taxation.

5. The Officers of the Association shall be a President, two Vice Presidents, a Recording Secretary and an Assistant, a Corresponding Secretary, and a Treasurer, who shall be elected annually, by ballot.

6. The President shall preside at all the meetings of the Association, preserve order and decorum, having a casting vote whenever there is a tie, and perform all the duties customary in such deliberative bodies. In the absence of the President, the oldest Vice President shall preside at such meetings.

7. It shall be the duty of Secretaries to record the proceedings of the meetings of the Society, read communications, read the names of members, arrange and procure the publication of all papers so ordered by the Society.

8. The Treasurer shall have charge of all funds of the Association, and report annually the amount received, from whom received, and how expended.

9. No funds shall be drawn from the Treasury, except by an order from the President, authorized by a vote of the Association.

10. The President shall, at each annual meeting, appoint two members of the Association from each county, to present written communications on subjects connected with the profession.

11. This Association shall have power, by a vote, at its regular meetings, to tax its members any sum it may see fit, to meet its expenses, not exceeding two dollars a year for each member. It shall have power, also, to inflict such fines and penalties as it may see fit, for the non-performance of any duty imposed, and to expel any member for unprofessional or disorderly conduct, or engaging in, or countenancing in any way, the various systems of quackery in vogue in our land, or for any conduct derogatory to the honor and good name of the profession.

12. No member of this Association shall engage in making, vending, or using, of any secret remedy or nostrum, in his practice, or consulting with those who do use them.

13. This Association shall be governed by the system of Medical Ethics adopted by the American Medical Association.

14. There shall be a Standing Committee of three in each county, to report to the annual meetings of this Association upon the endemics and epidemics which have prevailed, during the year, within the territory embraced by this Association, giving in full their etiology, treatment and pathology.

15. It shall be the duty of every member of this Association, in attendance at every regular meeting, to report at least one case that has occurred in his practice during the year, embracing its history, treatment, and pathology.

16. This Association shall appoint, at its annual meetings, two or more delegates to attend the American Medical Association.

17. Every member of this Association shall affix his full signature to this Constitution.

18. Any alteration or amendment of the above rules and plan of organization, may be made at an annual meeting of the Association, by a vote of three-fourths of the members present."

We would particularly call the attention of those of our readers who are interested in such association, to the importance of the fourteenth rule above quoted. If every Medical Society in our country would adopt the same rule, and in carrying it out, require their committees to note, in connection with the endemics and epidemics coming under their observation, the season of the year, the temperature, the soil of the district affected, the state of its surface and the condition of the atmosphere in respect to electricity, moisture, etc., we have no doubt but a flood of accurate knowledge would soon be accumulated in regard to the causes and pathology of all that class of diseases. We would suggest, however, that the *tenth* rule is altogether too indefinite. We know that it is a rule very generally adopted by similar Associations; and, so far as our experience goes, almost as generally neglected in practice. It seems to us that Medical Societies would do much more for the promotion of medical science, and the improvement of their own members, by assigning to their committees specific subjects for investigation. By doing this, they would be more certain to elicit a report or essay on the subject; they would also induce a more thorough investigation of the same, and by making a judicious selection, they might be constantly turning the attention of members to new subjects of inquiry; while, by the present mode, very few individuals will take the trouble to write an essay, except on a subject with which they are already familiar, and consequently the writer himself is not much benefited by the exercise, and the society seldom entertained with anything out of the ordinary range of subjects well known to the profession. Again; every Medical Society or Association should embrace in the range of subjects to which it especially directs the attention of its members, the Indigenous Medical Botany of its own district; and so much of the general subject of Hygeine as relates to the natural sources of disease in the several localities embraced within its limits. For we hold it to be as much the duty of our profession to point out the public sources of disease, and thereby as far as possible protect the community, as to cure disease after it has occurred.

N. S. D.

ADDRESS OF THE STATE MEDICAL CONVENTION, to the Governments of the several States, on the subject of a REGISTRATION OF BIRTHS, MARRIAGES AND DEATHS,—and the Report of the Committee appointed to prepare a Nomenclature of Diseases adapted to the United States, having reference to a General Registration of Deaths.

[It is hoped that every opportunity will be embraced by the members of the profession all over the Union, to urge the adoption of Registration Laws, by the State Legislatures.—*Ed. Jour.*]

The United States National Medical Convention, assembled in the City of Philadelphia, in May, 1847, desirous of the promotion of the true and vital interests of the people of their common country, in all their varied locations, circumstances and conditions, do respectfully recommend to the governments of the several States of the Union, the adoption of measures for a GENERAL REGISTRATION OF THE BIRTHS, MARRIAGES, AND DEATHS, which may occur within their respective borders.

No effort need here be expended in elucidation of the more ordinary purposes for which such a Registration should be universally adopted, such as proofs of lineage, rights of dower, and bequests of property. The importance of these cannot but be perceived on the least reflection.

But there are reasons more profound and far-reaching, results more important to the welfare and glory of man, obtainable by this measure, which not only justify, but demand its early adoption, and thorough consummation.

There are two facts to be noticed in this connection, which may not be denied:

First. Upon the circumstances connected with the three important eras of existence, birth, marriage and death, are dependent, to a very great extent, the physical, moral and civil condition of the human family.

Second. A knowledge of these circumstances is necessary for a full comprehension of important means for the certain advancement of the population of States, in prosperity and civilization.

To the political economist and vital statist, the laws which regulate and control the lives and destinies of the people of the present, cannot be a subject of indifference; to the legislator and statesman, ignorance of them is a bar to the full appreciation of their responsibility to the people of the future. The *philosophy of increase of population* is intimately connected with, and dependent upon, the proposed measure, and can be properly learned only from its facts and deductions. In countries longer settled than ours, this science has come to be one of profound importance to those who are called to legislate for the future as well as for the present. For example:—The population of England has increased, as the census proves—and the excess of births over deaths leaves beyond a doubt—in a geometrical progression for forty years, and at a rate by which, if continued, it will double every forty-nine years. Whether the means of subsistence keep pace with that increase, or whether the density of population will, ere long, be too great for its area, are important questions to be decided by their own statesmen.

An increase of population has, however, nothing in it irresistible or inexorable; *it consists in nothing but an increase of the births over the deaths*—and will be suspended if the births cease to maintain the same ratio to the population; and the births may always be reduced rapidly, by retarding the period and number of the marriages, without taking into consideration the increase by immigration. Circumstanced as this country is now, with its millions of unreclaimed acres, its exhaustless resources of subsistence and wealth, in its mountains and valleys, in its mines, rivers and forests, it would be judicious to invite, even with the vast immigration to be expected, rather than discourage, an increase of a native population, by encouraging early marriages, provided that thereby immorality or misery in any form will not advance with them.

But before we can make any recommendations on this subject, or before we can even intelligently discuss it, we must have a knowledge of the facts as they are. By commencing a Registration now, our successors will be furnished with the necessary material in time for any exigency that may arise.

Conclusive evidence is furnished to us of the value of a well-digested system of Registration for the improvement of the people in their moral and physical condition, and in the length of their lives. From the facts obtained thereby, are deducible the rules and inferences of health, and the sources of disease and premature mortality—many of which need but be known to be avoided. Coincident with improvements in the health and condition of individuals, are increase of years, and advancement in private and public morals, and in the strength and virtue of the State.

Among the first communities to establish a system of Registration of Births, Marriages and Deaths, was Geneva, where it was begun as early as 1549, and has since been continued with great care. The registers are there viewed as pre-appointed evidences of civil rights, and it appears that human life has wonderfully improved since they were kept. The mean duration of life increased more than *five times* from 1550 to 1833; with the increase of population, and more prolonged duration of life, *happiness also increased;* though with advanced prosperity, marriages became fewer and later, and thus the number of births was reduced, a greater number of infants born were preserved, and the number of adults—with whom lies the true greatness of the State—became larger. Towards the close of the 17th century, the probable duration of life was not 20 years—at the close of the 18th century it attained to 32 years—and now it has arrived to 45 years; while the real productive power of the population has increased in a much greater proportion than the increase in its actual number, and *Geneva has arrived at a high state of civilization.*

These results, so glorious for individuals, for the community, and for humanity, are derived from the better knowledge and understanding of the science of life and health, the data for which are furnished by the statistics of the Registers.

The information obtained by the Natural History surveys which have been made of many of the States of the Union, is directly interesting to only a very small number;—while the facts and inferences deducible from a sanatory survey and registration, interest and benefit, directly, the great mass of the people, for all are interested in their personal condition. Thus are produced in them more expanded views of the worth of life and the necessity for its preservation; a more thorough appreciation of the importance of purity in the principal sources of its continuance, air and food; more attention to the comforts of dwellings and clothing, more refined sensibilities, greater energy, and a better-regulated state of public and private morals. These results *have been obtained in Geneva.*

In Prussia, these measures are attended to in a mode deserving the highest commendation. Every fact relating to the health, lives and condition of the population, is there collected with great care by a central officer at Berlin, and published for the benefit of the people. The most beneficent results have accrued from the admirably-arranged statistical returns made for several years past in England. Of more than one large town, but of Liverpool especially, it was ascertained that the mortality was great, and the average age at death of the population low; whereas before, the inhabitants had boasted of their salubrity and longevity. The registration has, to them, truly proved the means of increase of health and years, after removing from their eyes the scales which blinded them to their own destruction.

In many of the European States besides those mentioned, facts in connection with this subject are registered and collated in the most scientific and systematic manner; and, to use the language of a distinguished American statist, whatever we Americans may say to the contrary, the average longevity, in many places, where these measures have been in operation, appears greater than with us." Indeed, we have no little reason to apprehend that, unless something is done to arrest the progress and pressure of the causes of premature mortality in this country, we shall be in danger of possessing only a very young and immature population. The average age of death in many of our large cities, as far as returns enable it to be shown, is under 20 years; a fact which can only be due to the unfavorable physical circumstances of the people, and their ignorance of the true means of living and avoiding disease.

The registers of the ancient Romans, which were preserved with great care, and recorded the births, sexes, periods of puberty, manhood, age at death, etc., kept by order of Domitius Ulpianus, prime minister of Alexander Severus, afford us the means of ascertaining the mean duration of life in Rome nearly 2000 years ago, and comparing this with the results of estimates made at the present day in places where similar records are kept, we are thus enabled to establish the gratifying fact of the great extension of the average period of human life in various cities and countries.

Of the results obtainable by the suggested measures, in connection with the census returns now regularly made in each of the United States, not the least important and desirable are *tables exhibiting the probabilities of the expectation of life.*

By this simple and elegant method, the mean duration of life, uncertain as it appears to be, and as it *is*, with reference to individuals, can be determined with the greatest accuracy in nations, and in still smaller communities. This is important, not merely in reference to the payments of life annuities, and the business of life insurance, whose great value is but just beginning to be felt in this country, but it is of inestimable interest, as determining to individuals their probabilities of living in their different classes, occupations, locations, and habits. "As it might be expected from the similarity of the human organization, that all classes of men would, *cæteris paribus*, live, on an average, the same number of years, it becomes important to ascertain whether this be the case; and if it be not, to determine to what extent life is shortened in unfavorable circumstances.

The life table answers this purpose, and is as indispensable in sanatory inquiries as the barometer or thermometer, and other instruments, in physical research. Upon applying it to any number of well-selected cases, the influence of any external cause, or combination of causes, can be analyzed; while without its aid, and extended observation and calculation, we are liable to be misled at every step by vague opinions, well-concocted stories, or interested statements, in estimating the relative duration of life; which can no more be accurately made out by conjecture, than the relative diameters of the sun, moon, and planets of our system."*

If these things are so, and of their truth there cannot remain the shadow of a doubt, it is plain that with this measure are entwined the highest earthly interests of humanity; and it belongs to the legislators of the New World, the guardians and custodians of the interests and glory of the American Republic, to consider well ere they longer postpone the adoption of a measure so essential thereto. "A comparison of the duration of the successive generations in England, France, Prussia, Austria, Russia, America, and other States, would throw much light on the physical condition of their respective populations, and suggest to scientific and benevolent individuals in every country, and to the governments, many ways of diminishing the sufferings, and meliorating the health and condition of the people; for the longer life of a nation denotes more than it does in an individual,—a happier life—a life more exempt from sickness and infirmity—a life of greater energy and industry—of greater experience and wisdom. By these comparisons, a noble national emulation might be excited, and rival nations would read of sickness diminished, deformity banished, life saved—of victories over death and the grave,—with as much enthusiasm as of victories over each other's armies in the field; and the triumph of one would not be the humiliation of the other, for in this contention none would lose territory, or honor, or blood, but all would gain strength."—(*Idem.*)

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* Fifth Annual Report of the Registrar-General in England.

Signed on behalf of the National Medical Convention, Philadelphia, May, 1847.

JONATHAN KNIGHT, M. D., Conn., *Presd't.*
Alex. H. Stevens, M. D, N. Y.
Geo. B. Wood, M. D., Pa.
A. H. Buchanan, M. D., Tenn.
John Harrison, M. D., La.
} *Vice Presd'ts.*
Richd. D. Arnold, M. D., Geo.
Alfred Stille, M. D., Pa.
F. Campbell Stewart, M. D., N. Y.
} *Secretaries.*

The Committee appointed "to prepare a Nomenclature of Diseases adapted to the United States, having reference to a General Registration of Deaths," beg leave to submit the following

REPORT.

No subject is more intimately connected with the prosperity and happiness of a people than the degree of their public health. Some places and some circumstances are known to be more favorable than others to the development and prolongation of the vital energies of man; and it is a matter of great moment to the whole population collectively, and to each one individually, to know what facts exist in the place selected for residence, which influence its character in this respect. No subject which can claim public attention should excite greater interest than that of obtaining a knowledge of the diseases and causes of death in operation among us. It is of great consequence to all of us to know when, where, in what form, and under what circumstances, sickness and mortality take place; and whether they are uniform, or dissimilar in different places, or in the same place in different seasons, and under different circumstances. Wherever this knowledge is possessed, remedies for the amelioration or extinction of existing evils can be applied more intelligently, and with better hope of success.

Fortunately there is a mode by which this information may be obtained, and by which the force of mortality pressing upon a people may be, in some respects, weighed and measured. This mode is, uniform and accurate registration of the causes and locality of death, and intelligible abstracts of those causes. This matter may be illustrated by the facts we already possess.—Let the whole force with which mortality presses upon us be represented by 100. It appears by the Fourth Report of the Registration of Births, Marriages and Deaths, in Massachusetts, for 1845, page 55, that of 10,000 of all the deaths by known causes that year, 667 were by *scarlatina*. This disease then, or this form or force of mortality, pressed upon us 6·67 per cent. of all forms or forces. It appears by the same Report, on page 82, that of 10,000 deaths 651 occurred in May and 1095 in September; showing that the proportional force of mortality was 68 per cent. less in the former than in the latter month. In 10,000 deaths in five different towns of the same population, 150 may occur in one and 300 in another, showing a different force in those places of 100 per cent. In this manner may this force be weighed and measured in all its details. The correctness of this measurement depends, however, upon the degree of accuracy by which the facts are registered and abstracted. A uniform and systematic plan of *registration* and *classification* is essential to secure this accuracy. From an extensive examination of the statements of deaths in different places in the United States, it appears that the same disease is sometimes given in one place, under a name different from that of the same disease in another place, and even in the same place, the same want of unformity exists in regard to the names of diseases in different periods. This is a great evil; and it must be obvious that, so long as it exists, it will be difficult, if not impossible, to make a statistical abstract, on which to institute accurate comparisons of the prevalence of different diseases, or of the health of the people in different places or in different periods. To remedy this evil, the plan of a nomenclature and classification of diseases contained in the appendix is proposed. It is intended to apply uniformly to all sections of our country.

REGISTRATION.—The following rules should be observed in registering the cause of death.

I. *Give causes of death the right names; and such as have the same meaning at all times, and in all places.*

Consumption, cancer, or any other name, for instance, should not be given when death was produced from another cause. The same name should, as far as possible, be uniformly used in every section of the United States.

II. *Such names should be used as would give a clear definition of the cause of death.*

Such terms as "fits," "infantile disease," "inflammation," "decline," "sudden death," etc., without specifying what kind of fits, what infantile disease, what inflammation, the cause of decline, or of sudden death, are improper. The particular disease, or cause of death in each case, should, as far as possible, be stated.

III. *A single word, or the least number of words possible, which would give this clear definition, should be preferred. Popular names may be used, but where no popular name in a single word is found, a technical or scientific term should be preferred.*

According to this rule, *consumption* would be preferred to phthisis; *croup* to cynanche trachealis; *pneumonia* to inflammation of the lungs; *enteritis* to inflammation of the internal membrane of the bowels, etc. By uniform use, the people would soon become familiar with scientific terms.

IV. *When more than one disease or cause have concurred in producing death, they may be written under each other without being connected with other words or particles, and in the order of their appearance.*

V. *State as nearly as can be known by numbers, the duration of the disease or diseases, if more than one has occurred in producing the event, in years, months, or days.*

This would supersede the use of the words 'sudden,' 'acute,' 'chronic,' etc., and which often convey indefinite ideas. The suggestions of the Seventh Report of the Registrar-General in England, should be observed in this connection. The duration of the diseases in these returns will always be considered to imply the time intervening between the first appearance of well-marked characteristic symptoms and death. Smallpox, scarlatina, erysipelas, typhus, and all febrile and inflammatory diseases should, however, be dated from the rigor and first symptoms, not from the later appearance of the eruptions, etc., etc. The time in the certificate opposite the primary disease will, therefore, include the whole term of the illness. Thus, scarlatina maligna, 21 days; purulent infiltration, 7 days; implies that the earliest symptoms of scarlatina occurred 21 days before death, and 7 days before death purulent infiltration was observed. So hooping cough, 16 weeks; paralysis of motor nerves, right side, 4 weeks; pneumonia, 3 weeks; is understood to mean that symptoms of the cough appeared 16 weeks, of the paralysis 4 weeks, of the pneumonia 3 weeks, before death. Strict attention to these suggestions ought to be paid to avoid confusion.

VII. *In fatal cases of smallpox, measles, scarlatina, typhus, and the like diseases, state whether it was the second, third, etc. attack, when the patient has sustained more attacks than one. In ague, epilepsy, convulsive and other diseases which occur in fits or paroxysms, date the illness from the first fit, and add the duration of the last fit.*

Thus "Epilepsy, 5 years; last fit, 6 hours."

VIII. *Surgeons, in all cases of operations, should return the primary disease, the operation, the secondary disease, and should state also the time from* *the commencement of the primary disease, the time from the operation, and the time from the appearance of secondary disease, reckoning in each instance to the death.*

IX. *In external causes of death, the nature of the injury and the circumstances of the death should be stated; and whether by accident or design.*

The following are examples of such record: "killed on rail-road," "shot *accidentally*," "suicide," "hanging," etc., etc.

X. *When poison has been the cause of death, the time which elapses between its administration and the death should be registered, as far as possible.*

Examples:

"Laudanum, (suicide,) - - - - 8 hours."
"Oxalic Acid, (accidental,) - - - - - 20 minutes."
"Arsenic, (murder.) - - - - - - 30 hours."

XI. *The cause of the disease, when clearly known, may be inserted.*

It would perhaps be impracticable to carry out this rule to any very great extent, but in some cases it might be important. No cause of disease should be given unless distinctly ascertained. The following are cases in which such a record might be made: "Tetanus, wound in the hand, 2 days;" "Delirium Tremens, Intemperance, 5 days;" "Scarlatina—exposure to the disease, four days."

XII. *The cause of death should, if possible, be certified by a physician present during the last sickness; or, when no physician was present. by such other person as might be best qualified. These rules should be observed by coroners.*

The information proposed to be obtained by the certificate in Appendix A, is divided into two parts, for the purpose of giving the physician no other trouble than merely to certify the cause of death, unless he chooses to give the other information. The sextons may obtain a personal description from other sources.

Classification.—There are many different causes of death, and many names given to the same cause. Many vague, unmeaning, and incorrect terms are often used; and it would be difficult, if not impossible, to make a statistical analysis embracing each in detail. It becomes necessary to group those that are synonymous, or nearly so, under one name; and those operating in a particular way or affecting a particular organ, under one class. The advantages of such a classification are too obvious to require discussion. It has been well said, that "a nomenclature is of as much importance in this department of inquiry, as weights and measures are in the physical sciences."

The first question that presents itself is: How shall this classification be made? Various nosological arrangements of the diseases have been proposed, possessing a greater or less degree of merit, but many of them appear better adapted to the general purpose of science than to statistical investigations. Those who study this subject will perceive that there are difficulties attending the details of any classification of diseases; and that it is not easy to make one that shall be entirely satisfactory, even to one's own mind. In making one, however, there are certain principles of known and acknowledged importance, which should be observed. Some diseases are known to have an epidemic and zymotic character, and the public health of a community is generally measured by the proportion to the whole deaths in which they prevail. Others are known not to have this character, but to be sporadic. Death is also produced by *external causes* without disease.

Here then are three classes of causes which it would seem might be separated. This division alone would, however, leave so large a portion among the sporadic, that some other subdivision becomes proper. To provide for this, a classification of diseases which affect a particular organ, has been adopted. Some special diseases, however, (dysentery for instance,) belong to the Zymotic, as others belong to the Sporadic class; and it has been suggested that the former should be divided as well as the latter. This might be useful for more minute analysis, but for general purposes too many subdivisions embarrass rather than simplify the information. In making investigations in which it is desirable to include all diseases of the digestive organs, it will be easy to separate the Zymotic diseases which affect these organs from the rest, and add them to those of the Sporadic class.

The following rules should be observed in making a classification of diseases for statistical purposes.

I. *All Zymotic diseases, or such as are known to be epidemic, endemic, or contagious under any circumstances, should be classed together.*

II. *All Sporadic diseases, or such as are known not to be epidemic under any circumstances, should be separated into classes, according as they affect particular organs of the body;—such as are of uncertain or general seat, forming a distinct classs*

III. *Deaths by old age, or from external causes, should each form a class.*

IV. *For convenient reference, all the names in the classified causes of death, and others proposed to be used in the registers, and their synonyms, both popular and scientific, should be arranged alphabetically in a separate list, and accompany each other, and opposite to each the synonym by which it is defined.*

The most recent nomenclature and classification of disease, is that prepared by Wm. Farr, Esq., and used in the registration system in England. It has been generally approved, and seems better adapted for its object than any known, and might, with some modification, be adopted in this country. In preparing the nomenclature and classification contained in the appendix to this report, we have followed Mr. Farr's plan, having the rules already given in view. As a general alteration of his plans, for the purpose of more convenient reference, the names of each class are arranged alphabetically. The other alterations are as follows:—

Class 1*st*. This class is the same as the English, except that it transfers "Hydrophobia" to the 12th class, and includes "Cholera Infantum," which is considered, in this country, a distinct disease.

Class 2*d*. This class transfers "Purpura" to the 10th class, substituting Cancer for Carcinoma, and includes "Infantile Diseases." The last term is used, not because it is liked, but because many causes of death are returned under this name. When more accurate diagnoses shall be observed, the number registered under this name, and "Inflammation," and "Sudden Deaths," will be lessened.

Class 3*d*. Same as the English system.

Class 4*th*. Same as the English system, excepting it substitutes the word "Consumption" for "Phthisis"

Class 5*th*. Same as the English system.

Class 6*th*. This class throws out "Tabes Mesenterica," "Strictura," and Hæmatemesis;" and instead of "Stomach, etc., Diseases of," "Organs, etc., Diseases of." is used, that it may include special diseases of any of the organs of digestion.

Class 7*th* We have excluded "Ischuria" and "Stricture" from this class, and substituted "Gravel" instead of "Stone."

Class 8*th* In this class we have excluded "Ovarian Dropsy," and substituted "Puerperal Fever." Although this is a highly contagious disease, yet it is not known to occur except in connection with child-birth. We have thought it but proper, therefore, to class it with that cause of death. The word "Organs" has been substituted for "Uterus," as the more appropriate term.

Class 9*th* We have not used the term "Arthritis" in this class, but have added "Hip, Disease of," and "Spine, Disease of," as deaths often happen from these local diseases.

Class 10*th* "Carbuncle" and "Phlegm" being rare causes of death, are not used. "Purpura," being a disease of the skin, is placed here instead of the 2d class

Class 11*th*. Same, of course, as the English system.

Class 12*th*. In the English system those terms only are used in the abstracts for this class, "Intemperance," "Starvation," and "Violent Deaths;" but it is a matter of considerable moment to the people to have a more minute division, and we have accordingly included several others. "Hydrophobia" and "Necusia" are placed by Mr. Farr with the zymotic class; but since they arise from external injuries, it is supposed they might properly be classed here as "Poisoned," or "Intemperance."

We submit, accompanying this report, and to form a part of it, an appendix, containing papers marked A, and B. Appendix A contains a blank form for a certificate for a return of a death to the Register, and the same filled out; illustrating how it should be done. Certificates of Birth and Marriage are also appended, though not contained in the original report. The form, it will be perceived, proposes to obtain several particulars which should be recorded in tabular form in the register. The propriety of inserting the sex, place, and date of birth, and the name, condition, occupation, and age of the deceased, will become evident to any one who examines this subject, and understands the influence of this matter on human life. In giving the age, when over one year, complete years only need be used; when under one year, months or days should be inserted. It is useful also to insert the particular locality, in order to ascertain whether any influence exists there favorable or unfavorable to health and longevity. Some districts in the same towns or cities are known to be more healthy than others. It is also a matter of great personal interest in tracing connections and determining the distribution of property, to identify individuals particularly; and this cannot be done, in many instances, without the occupation and particular place of residence of the deceased, and the name and residence of the parents are given. Hence the propriety of inserting information on these matters. The *causes of death* should be accurately given; and that part of the return is separated from the other, and designed to be certified, if possible, by a professional man, or any other person competent to give the information correctly, who was present during the last sickness.

Appendix B contains the names of diseases which it is proposed should be used in making general abstracts for publication. This is divided into two parts. In Part 1st they are arranged alphabetically. In Part 2d they are classed according to the rules already given, each class being also arranged alphabetically. In making out tables for publication, it might be well to print the facts under the diseases in both arrangements, according as they are presented in the Fourth and Fifth Report of the Registration in Massachusetts. In making such abstracts, diseases which are returned under a name not found in this list, should be arranged under one of a similar character in the list.

Respectfully submitted.

(Signed)
JNO. H. GRISCOM, of New-York,
LEMUEL SHATTUCK, Boston,
T. ROMEYN BECK, Albany,
EDWARD JARVIS, Dorchester, Mass.,
G. EMERSON, Philadelphia,
CHARLES A. LEE, Geneva,
Committee.

APPENDIX A.—*Blank form of a return of a Death.*

I hereby certify that a ——— person died in ———, at No. —— Street (or place), on the —— day of ———, A. D. 18—. The name of the person was —————, condition a ———, the occupation a ———, and the age — years, — months, — days. Said person was born in ———, and was the ——— of ————————, residents of ————. Interred in the ————.

—————, *Informant.*

I hereby certify the disease or cause of death of the above person was as follows:—

CAUSE OF DEATH.	DURATION OF DISEASE.
Primary disease, ————,	————
Secondary disease, ————,	————

———— M. D., present during last illness.
Dated at ——, on the —— day of ——, A. D., 18—.

—

Form of a Return filled out.

I hereby certify that a [female*] person died in [Salem], at No. [102 Essex] street, or place, on the [22d] day of [May], A. D. 18[46]. The name of the person was [Mary E. Brown], and her condition was a [widow]. Her occupation [a tailoress], and her age [45] years, [—] month and [—] days. Said person was born in [Concord, N. H.], and was the [daughter] of [John and Mary Brown], residents of [Concord]. Interred in [South Burying Ground].

[JOHN OAKES], *Informant.*

I hereby certify that the disease or cause of death of the above person was as follows:—

CAUSE OF DEATH.	DURATION OF DISEASE.
Primary disease [Measles],	[21 days].
Secondary disease [Pneumonia].	[7 days].

[EDWIN FOSTER], M. D., present during the last illness.
Dated at [Salem], on the [24th] day of [May], A. D. 18[46].

—

Certificate of Birth.

Name, or sex, of child,
Place and date of Birth,
Father's name and age,
Father's occupation and birth-place,
Mother's name and age,
Mother's birth-place,
Signed,
Physician,
Parent.

Date of Certificate.

The color of the parents, if not white, should be mentioned immediately after their names. Any *deformity* of the child should be mentioned in a note.

—

Certificate of Marriage.

To be signed by the officiating clergyman, or magistrate, or officer of the church, or by one or more respectable witnesses. The color of the parties, if not white, to be stated immediately after their names.

This is to certify, that on the 18*th* day of *June*, 1847, *John S. Thomson*, a *bachelor or widower*, aged 35 years, by occupation a *carpenter*, son of *Joseph* and *Mary Thomson*, *former*, *latter*, *or both* deceased, a native of *New-York*, was united in MARRIAGE, to *Priscilla Van Woert*, a *widow or spinster*, a native of Massachusetts, aged 25 years, and daughter of *Thomas* and *Susan Van Woert*, *former*, *latter*, *or both*, deceased.

Signed,

Note.—In printing this form for use, the words in *italics* and the *figures*, must be left blank.

---

* In addition to this, the color might be prefixed, if the person was not white, as Black, Mulatto, Quadroon, or Indian.

APPENDIX B.—Part 1.

Nomenclature of Diseases, Alphabetically arranged.

Abscess
Aneurism
Apoplexy
Ascites
Asthma
Atrophy
Bowels, disease of
Brain, disease of
Bronchitis
Burns and Scalds
Cancer
Cephalitis
Childbirth
Cholera
Cholera Infantum
Chorea
Colic
Consumption
Convulsion
Croup
Cystitis
Debility
Delirium Tremens
Diabetes
Diarrhœa
Dropsy
Drowned
Dysentery
Dyspepsia
Enteritis
Erysipelas
Executed
Fever, Intermittent
Fever, Remittent
Fever, Typhus
Fever, Yellow
Fistula
Frozen
Gastritis
Glanders
Generation, Organs, Disease of
Gout
Gravel
Hanged
Heart, Disease of
Heated
Hemorrhage
Hepatitis
Hip, Disease of
Hooping Cough
Hydrocephalus
Hydrophobia
Hydrothorax
Infantile Disease
Inflammation
Influenza
Intemperance
Insanity
Intussusceptio
Jaundice
Joints, Disease of
Kidney, Disease of
Killed, accidentally
Killed, by design
Laryngitis
Lightning
Liver. Disease of
Lungs, Disease of
Malformation
Malpractice
Measles
Mortification
Nephritis
Necusia
Old Age
Pancreas, Disease of
Paralysis
Paramenia
Pericarditis
Peritonitis
Pleurisy
Pneumonia
Poisoned
Purpura
Puerperal Fever
Quinsy
Rheumatism
Scarlatina
Scrofula
Skin, Disease of
Smallpox
Spine, Disease of
Spleen, Disease of
Stomach, Disease of
Strangulated
Still-born
Sudden Death
Suicide
Syphilis
Teething
Tetanus
Thrush
Tumor
Ulcer
Urinary Organs, Disease of
Worms
Unknown

APPENDIX B.—Part 2.

Nomenclature of Diseases, Classified for Statistical purposes.

Endemic and Contagious Diseases.
I. Zymotic, or Epidemic.
1 Cholera
2 Cholera Infantum
3 Croup
4 Diarrhœa
5 Dysentery
6 Erysipelas
7 Fever, Intermittent
8 Fever, Remittent
9 Fever, Typhus
10 Fever, Yellow
11 Hooping Cough
12 Influenza
13 Measles
14 Scarlatina
15 Smallpox
16 Syphilis
17 Thrush

Of Uncertain or General Seat.
II. Sporadic Diseases.
18 Abscess
19 Atrophy
20 Cancer
21 Debility
22 Dropsy
23 Gout
24 Hemorrhage
25 Infantile Diseases

26 Inflammation
27 Malformation
28 Mortification
29 Scrofula
30 Sudden Death
31 Tumor

III. *Of the Nervous System.*

32 Apoplexy
33 Cephalitis
34 Chorea
35 Convulsions
36 Delirium Tremens
37 Epilepsy
38 Hydrocephalus
39 Insanity
40 Paralysis
41 Tetanus
42 Brain, diseases of

IV. *Organs of Respiration.*

43 Asthma
44 Bronchitis
45 Consumption
46 Hydrothorax
47 Laryngitis
48 Pleurisy
49 Pneumonia
50 Quinsy
51 Organs, etc., diseases of

V. *Organs of Circulation.*

52 Aneurism
53 Pericarditis
54 Organs, etc., diseases of

VI. *Of the Digestive Organs.*

55 Ascites
56 Colic
57 Dyspepsia
58 Enteritis
59 Gastritis
60 Hernia
61 Intussusceptio
62 Peritonitis
63 Teething
64 Ulceration
65 Worms
66 Organs, etc., diseases of
67 Pancreas, disease of
68 Hepatitis
69 Jaundice
70 Liver, disease of
71 Spleen, disease of

VII. *Of the Urinary Organs.*

72 Diabetes
73 Cystitis
74 Gravel
75 Nephritis
76 Organs, etc., diseases of

VIII. *Of the Organs of Generation.*

77 Childbirth
78 Puerperal Fever
79 Paramenia
80 Organs, etc., disease of

IX. *Organs of Locomotion.*

81 Rheumatism
82 Joints, etc., disease of
83 Hip, disease of
84 Spine, disease of

X. *Of the Integumentary System.*

85 Fistula
86 Ulcer
87 Purpura
88 Skin, disease of

XI. *Old Age.*

89 Old Age

XII. *Of External Causes.*

90 Burns and Scalds
91 Drowned
92 Executed
93 Frozen
94 Glanders
95 Heat
96 Hydrophobia
97 Intemperance
98 Killed accidentally
99 Killed by design
100 Lightning
101 Malpractice
102 Necusia
103 Poisoned
104 Strangulated
105 Starved
106 Suicide
107 Wounds
108 Still-born.

PHLEGMASIA DOLENS.—Phlegmasia Dolens consists of three distinct stages, depending on three essentially different pathological conditions.

The first may be denominated the Neuralgic stage. It is marked by the violence and excruciating nature of the pain, which is, indeed, truly and emphatically dolorous. This stage is often short, terminating frequently in twelve hours. It is sometimes, however, protracted to forty-eight hours.

The second stage may be called the albuminous. It is marked by a great diminution or total cessation of pain, when the affected part is at rest, and by an *elastic* swelling of the limb, of a white shining appearance, with exquisite soreness to the touch, with intolerance of motion. The swelling arises from the effusion of albumen into the cellular tissue.

The third stage may be fairly called serous. It is marked by a subsidence or absence of morbid sensibility in the part, with a softening and pitting of the swelling, showing it to be merely an effusion of serum in the cellular tissue.

The treatment of these three stages requires essentially different means. To arrest the first stage, a full dose of opium and camphor is required. The quantity must be sufficient fully to allay all pain. I have administered eight grains of each at a dose, in a severe case, which arrested the disease at once. By this one step, the morbid catenation may be broken up in a few hours, to return no more.

The treatment of the second stage consists in the employment of antimonial emetics. One is generally sufficient to convert a tense albuminous swelled leg into a soft serous state. If one fail, another will most surely succeed.

The third or serous stage is one merely of anasarca, and requires only the ordinary means for its removal; the most important of which is the calico bandage. This is to be accompanied with diuretics and tonics, especially a pill at bed-time, of calomel and squills, with a free use, during the day, of a decoction of Pyrola Imbellatà, Asclepias, Syriaca or milk-weed, the Eygum Philadelphicum, or any other good diuretic, assisted by friction of the surface.

JAMES FOUNTAIN, M. D.

[The above note on *Phlegmasia Dolens*, which was kindly furnished by Dr. Fountain, at our request, for our edition of *Copland's Dictionary of Medicine*, was received too late for insertion in that work, which is now in type as far as the English edition has been published. In answer to many inquiries in relation to that work, we would beg to state, that we have satisfactory assurances that it is far advanced towards completion, and will be finished in the course of the ensuing year. It will not be delayed here over three months from the time of its publication in London.—Ed.]

UNGUENTUM SAPONIS PLUMBÆ.—MR. EDITOR, I have prepared for some years past a cerate which, in appearance and in therapeutical effects, resembles closely the various *Pain Extractors*, so notoriously puffed in our city and neighboring towns. It is known to the profession in the habit of frequenting my establishment, under the officinal name of *Unguentum Saponis Plumbæ*. It is a Solution of the *Protoxide of Lead* in the fatty acids, *Margaro-Stearate of Lead*. I prepare it as follows:

℞. Olive Oil Soap,* 2 parts.
Neutral Acetate of Lead, 1 part.

Dissolve the Soap in a sufficient quantity of water, add the acetate to the soapy solution, and stir the mixture for a while; then remove or separate the aqueous portion, and take one part of the Stearo-Margarate of Lead which remains in the pan, add to it 3 parts of firm hog's lard, and mix the whole together on the fire.

It is used with advantage in excoriated surfaces, burns, piles, fissures of the breast, arms and hands, sore lips, and also in some forms of neuralgia.

Very respectfully, EUGENE DUPUY.
609 Broadway, New-York.

TO FORM A GOOD STRAMONIUM OINTMENT AT ALL SEASONS.—Gather the Stramonium leaves in July and August; reduce them to coarse powder, after having been slowly dried, and keep in a dry place. When you wish to make your ointment, moisten the proper quantity of powdered leaves with strong alcohol. put the moistened leaves in a displacement funnel, and pour your hot lard upon it; keep it, by means of a stone or water-bath, in a liquid state till the whole is passed through. If prepared according to these directions, it gives a beautiful product, not liable to become musty, and more active than that prepared in the usual mode of boiling the leaves.

---

* Good Castile Soap will answer very well.

To render Epsom Salts very palatable.—Boil ℥i. of Sulphate Magnesia with ʒiv. ground burnt Coffee, and ℥xij. of water for ten minutes; strain and sweeten; a small quantity of tannin renders it still more palatable.

FRANCIS DELLUC.

581 Broadway.

Alterative Cough Mixture.

℞. Solut. Cyanuret Potass, (22 grs. to ʒvii. alcohol,)
Solut. Iod. Potass, (saturated) aa ℥ss.
Solut. Morphine, ʒii.
Syrup Acaciæ ℥ii.
M. Dose 20 to 60 drops.

H. G.

Or, ℞. of each of the three first ℥ss.
Dose 10 to 20 drops.

Medical Society of the State of Georgia.—We are much pleased to learn that this honorable body has sanctioned and unanimously adopted the proceedings of the late National Convention, on Preliminary Education and Medical Ethics. A full account of its proceedings relating to this matter may be found in the Nov. number of the Southern Med. and Surg. Journal.

New-York Annalist.—This ably-conducted Journal, by our former gifted contributor, Wm. C. Roberts, M. D., has recently commenced its second year of publication under new auspices: hereafter the Messrs. R. and G. S. Wood will be its publishers. It will appear, as heretofore, semi-monthly, at the merely nominal price of $2 per annum. All our readers who wish to become conversant with the current Medical news of the day, will find this one of the best publications that our country affords.

2.

Foreign Medical Intelligence.

SURGERY.

New and successful Method of treating Prolapsus Ani.—By Dr. Hake. (*Condensed from the London Med. Gaz.*)—The method consists in returning the bowel or hæmorrhoidal tumors with great care after the daily motion; in assisting its return by means of soap lather; in applying a coil of moist sponge firmly upon the anus, and, while retaining it there with one hand, bringing the nates together by means of a broad strip of adhesive plaster, as in approximating the edges of a wound.

This method Dr. Hake has now tested in several cases; it has never failed of success.

[The following is extracted from a letter of a patient who first put the plan to trial, and by whose ingenuity it was first conceived.]

"Take a piece of sponge four or five inches long, an inch and a half wide, and half an inch thick, the more elastic the better; roll this in a damp, but not wet state, pretty tightly, so that the roll, if relaxed, would be ready to spring back into its full length, and it will then make a roll of some little substance, round, but still soft, and its length, when thus rolled, will of course be an inch and a half. Apply it, then, lengthwise, to the anus, so that it may be pressed, about the centre of it, quite home, and firmly to the part. Taking care that it may remain so, stretch a length of adhesive plaster, about fourteen inches long, and three and a half wide, more or less, straight across the nates, rather low down, and contrive so that while the plaster adheres on one side, you press the other side closer to its opposite, before you fix the length finally where it is to remain. Then sit down, at first gently upon it, and it will become very firm, and fast, so long as the plaster is good. These two pressures constantly going on, do the work without any inconvenience worth speaking of; I mean the roll of sponge always striving to unwrap itself, and the cross-band of adhesive plaster always keeping it from doing so by holding the nates sufficiently close together. The working is perfect with a little use and management. I never put this on until I am going about, or to take exercise, whether walking, riding, or driving In the evening, I take off the plaster, but leave the sponge in its place, where it has got by that time so firmly fixed by gradual spreading and swelling, that there is no danger that anything short of great exertion will loosen it, and it is of course more comfortable to do without the plaster when it is not wanted. The sponge should be washed in cold water every time it is taken off, and in cold weather the plaster should just cross the fire before it is put on; in moderately warm weather, it will adhere of itself, especially if it is sat upon for half a minute. The same plaster is better the second day than even the first, and will do even the third, where economy is an object. Wash the parts where the plaster goes every morning, or oftener, with cold water, or water and vinegar, and the skin will never suffer. If the plaster leaves something behind it, when it is taken off, rub it with a very little spirit of wine, and the towel will remove it.

"If there be an irritation about the anus, or the gut that comes down, wash it with vinegar and water, and the relief will be wonderful, and that part of the evil soon cured. This wash cannot be too much praised for this purpose, for piles and for the like.—(*Ranking's Abstract.*)

—

On Exostoses and their Treatment. By M. Roux.—(*Condensed from the Revue Medico-Chirurg. de Paris.*—Under the term exostoses, pathologists have confounded—1, Simple, permanent, or chronic hypertrophy of the whole or of a part only of a bone; 2, osteosis, with a circumscribed swelling of the affected bone; such as is often observed in constitutional syphilis; 3, aneurismal tumors of bone; 4, sarcomatons swellings of bone; 5, degeneration of bone with tumors, denominated by Sir. A. Cooper "fungous or medullary exostosis;" 6, tumors organized like the osseous tissue itself, elevated above the surface of the bone in the manner of the natural apophyses or in the form of large tubercles, produced from the external surface on which they appear to be implanted.

The term exostosis belongs properly to the latter. Exostoses generally occur singly, but occasionally more than one is met with in the same or in separate bones. Effusion into the bursa mucosa takes place over the exostoses, as in the following case:

A man, aged 22 years, presented himself, in December, 1843, with a hard, slightly-mamillated tumor, continuous with the femur at the posterior and inferior part, resembling a large apophysis at the commencement of the popliteal space. It scarcely raised the superimposed skin, although nearly as large as a child's thumb. On examining it carefully by separating the muscles between which it was placed, it was ascertained to be attached to the femur by a contracted base, a kind of thick pedicle. It was not congenital, but was first observed a few years previously, and after growing rapidly, it remained stationary for about eighteen months, or two years. Recently a new symptom had presented itself; a quantity of liquid formed between the projecting part of the tumor and the exterior soft parts. This liquid appeared to be contained in a small membranous point placed immediately over the osseous tumor, which had in consequence appeared to increase in size. This complication was no other than a small synovial collection, analogous to those which so frequently form over the patella, the olecranon, and the external malleolus, from slight contusions or habitual pressure, as shown by its having become rapidly absorbed after the continued application of a strong aqueous solution of hydrochlorate of ammonia. The patient was discharged after the absorption of the fluid, as its situation forbade the extirpation of the tumor.

[M. Roux gives a resumé of his memoir on the following conclusions.]

1. Among the different tumors of bones, there are some in which alone the name of exostosis should be applied, and which must be carefully distinguished from all those which have been comprised under this denomination.

2. Exostosis consists principally, like the bones, of a spongy or areolar tissue, with a thin rind of compact substance; or entirely of a compact tissue, very hard, and, as it were, eburnated.

3. An exostosis of this kind adheres to the bone upon which it is developed by a contracted base in the form of a short pedicle, and proportionally large to the size of the tumor.

4. After a time they cease to grow, and never exceed a certain degree of development.

5. Generally their definitive bulk is proportional to the size of the bone upon which they are implanted.

6. Generally they have only a contiguous relation with the soft parts upon which they are situated; sometimes, however, they adhere to them.

7. They do not diminish in size, and they preserve indefinitely their primitive structure; at most their tissue acquires more density by time, the same as the bones do when they are forming.

8. According to the place they occupy, sometimes they constitute simply

a deformity; at others they cause a greater or less impediment to the functions of the organs which they border upon; sometimes they prevent the accomplishment of these functions.

9. Ablation is almost always practicable. The exceptions are where their position is inaccessible.

10. In nearly all cases ablation is indicated, either to remove a great deformity or to put an end to habitual suffering, or to re-establish the regularity of the functions of the parts.

11. In most cases it can be practised without previously exposing the tumor; and without difficulty.

12. But the operation is sometimes attended with injurious consequences, either on account of some peculiarity in the seat of the tumor, or in its relation to the neighboring parts, or on account of a bad state of the patient's constitution; generally, however, it succeeds.

[Dupuytren does not distinguish these varieties of diseased bone, nor does he thus limit the application of the term exostosis, as will be seen by reference to his work just published by the Sydenham Society (p. 408). He gives five cases of exostosis on the ungual phalanx of the great toe, and states that he has operated on as many as thirty similar cases. Previous to this time, the morbid growth in this situation has been usually mistaken for a wart, and mischievously treated as such by cauteries; or it has been mistaken for the nail growing under the skin. Dupuytren's sixth case in the same work appears to be one of very general hypertrophy of the bone; at all events, it could not be regarded as an exostosis, according to the definition above given by Roux; his ninth and last case is a very interesting one of "Exostosis on nearly all the bones," (p. 414,) of which class of cases he has seen many instances; he does not attribute them to a venereal taint, but to some irregularity of the nutritive process, "the cause and effect being probably associated, as it is in instances of similar excrescences growing from certain trees."—(*Ranking's Abstract.*)

On the Division of the Tendo-Achillis.—Professor Stromeyer has lately published the following propositions, in which he lays down the indications for, and the manner to proceed in, dividing the tendo-Achillis.

1. The tendo-Achillis ought to be divided with a small thin knife with a sharp point, and slightly rounded, employing the subcutaneous section, and cutting from within to without, taking care to make but one puncture of the skin.

2. The tendon must be entirely cut through, or the operation will be unsuccessful.

3. When other muscles or the plantar aponeurosis are retracted at the same time as the tendon, the former must always be divided before the latter.

4. After the operation the wound must be dressed with compresses, bound on with a bandage in the figure of eight.

5. With adults, on the fourth or fifth day after the operation, and with children, on the third or fourth, the first dressing must be removed; and if (as is often the case) the wound is found to be healed, it must be opened again; this must never be done when there is great ecchymosis, or when the wound suppurates.

6. Before putting the foot in the machine for extension, the limb must be surrounded by a sound bandage, and some pads of cotton must be placed on all the parts that are to be submitted to great compression.

7. Extension must be proceeded with gradually and slowly, lessening it each time it gives pain to the patient.

8. The dressings must be removed if the patient suffers much, and continued pain in the parts compressed, in order to avoid excoriations, erysipelas, or mortification of the tissues.

9. Immediately upon taking off the dressings, the limb must be enveloped in wool.

10. It ought to be known, that all those who have the tendo-Achillis

divided, have felt a sensation of cold and numbness, which is somtimes limited to the heel, sometimes extends over the whole limb. This sensation gradually diminishes, and generally disappears entirely by the sixth or eighth day.

11. The first day or the next morning after the operation, a viscid sweat of a disagreeable odor comes out on the foot, although the patient has never previously been subject to perspiration of the feet.

12. In placing the foot in the extension machine, it ought to be put in such a direction as to form a right angle with the leg; and this position ought to be maintained for eight days. After this period has elapsed, the limb must be enveloped in a circular bandage, and the patient must not be allowed to make any attempt to walk before the fourth week. Without this care, the limb will swell, the wound become irritated, and perhaps even the new tissue will give way.

13. It is impossible to name precisely the duration of the treatment. This must in some degree depend on the state of the patient, the degree of the deformity, and the extensibility of the articular ligaments.—(*Prov. Med. and Surg. Journ.*)

Injuries and Diseases of the Muscles and Tendons of the Abdomen.—Rupture of the Triceps Cruralis Muscle.—Our extracts contain an article on this subject, by Mr. Grantham (46), which induces us to refer to a memoir published by M. Demarquai, in 1842, giving an account of all the cases he could collect of rupture of the tendon common to the rectus femoris and the two vasti, which has also been called the supra-rotular tendon. There were, at the time the memoir was published, 13 cases, in two of which the rupture occurred in both legs. Dr. Renouard has recorded a third case of the latter description.* A man, aged 59 years, struck his foot whilst running, and fell forwards. In the violent effort made to save himself he experienced great pain in both knees; an instant afterwards his legs folded under him, he fell, and could not raise himself.

When assistance arrived, his legs were strongly flexed, and there was great difficulty in extending them; but after this was effected he experienced great relief. He was taken to bed with his legs swollen; the skin became tense and shining from the first day, and on the following morning the legs were blue and yellow.

Two days after the accident, feeling no pain, the patient left his bed and attempted to walk across his chamber with the aid of two canes; but he again fell, and was obliged to call for assistance to be lifted into bed. His medical attendant now extended the limbs, and put them into splints and bandages. After about two months' confinement, but little progress was made towards a cure, and he was removed to Paris. At this period Dr. Renouard found the tendon of the triceps femoralis ruptured just at its point of insertion in both legs. The superior extremity was separated from the patella about three centimeters by the contraction of the muscles. On completely extending the limbs, the patient sitting, and pushing the patella upwards with one hand, and the tendon downwards with the other, the distance to which they were separated was diminished one-half; but when the hands were withdrawn, the parts resumed their original position. The finger could be placed in the hollow which separated the tendon and the patella, and this space was larger in the left than in the right limb

Sitting, or lying on an horizontal plane, the patient had no power whatever to raise the left, but he could raise the right leg a few centimeters above the level. He had the power of flexing the leg on the thigh, but no power of extension. On raising him by the shoulders he could not stand alone for one moment.

Treatment.—The indications were:—1st, to re-unite the ruptured parts;

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* Revue Méd., Sept. 1846, p. 55.

2d, to maintain them in contact; 3d, to attend to the general health. The uniting handage, it is stated, failed to fulfil the first intention, since the tendon could not be kept in contact with the patella by means of it. For several reasons a suture would not answer. After exciting a great deal of pain and irritation it would certainly fail, owing to the powerful retraction of the muscle. The only plan was to maintain the limbs in a state of continued extension. This was effected in the right leg by means of a roller and two small splints placed on each side of the knee; in the left, which was the most severely injured, by means of a special apparatus, which allowed the limb to be uncovered daily to ascertain its state, and to employ aromatic and strengthening embrocations.

The right leg was left loose at the expiration of a month; the left leg required three months for a cure of the local symptoms. Five months and a half after the accident the patient walked well with crutches, and could even stand alone for a short time; and at the expiration of another month he walked with the assistance of a cane only, and the limb progressively recovered its strength.

Dr. Renonard makes the remark, that from the time that the patient was capable of extending his limb, and could stand upright, and move a few steps across his chamber, on requesting him to bend his leg, two cords were observed under the skin, proceeding from each superior angle of the patella, running parallel to each other, and losing themselves in the muscular flesh on each side of the ruptured tendon. They were at first very fine and slender, and the whole width of the patella apart from each other; but they became strong and increased in size by degrees, and by gradually approaching the median line, and ultimately they were separated by the space of only half a centimeter. When the limb was bent, a quadrilateral space was observed above the patella, into which the extremity of the finger could be placed, and the subcutaneous cords which bound it on each side might be felt. These cords had not acquired sufficient density to act completely as tendons until after the expiration of a year.

The union of tendons is believed to be generally effected either by coaptation of the divided parts, or by the aid of a new tissue formed between them. Nothing of the kind occurred in the above case; the ends of the divided tendon were never united at all; they remained divided, and their functions ceased. A tendinous cord of new formation was substituted in place of the original structure, and appeared to differ from it materially, and in nothing more than the length of time required for its complete formation.

In one of the cases collected by M. Demarquai, the patient died of apoplexy a year after the accident, and Dr. Martini found that the extremities of the ruptured tendon were united by means of "a very resistent fibrous tissue." Dr. Bouvier has also made the remark that "the formation of the new tendon is owing to the surrounding cellular tissue being first converted into a canal, and changing gradually into a solid cord of fibrous substance, which, without being exactly of the same nature as the tendon whose place it supplies, is perfectly competent to fulfil its functions."*

Myo-tenotomy.†—In an article on the indications and contra-indication for this operation, Dr. Neumann states that tenotomy has been much abused, particularly of late; and he has endeavored to determined the cases in which purely mechanical means are sufficient to effect a cure. Dr. Neumann lays it down as a principle, that there is but one pathological condition which indicates myo-tenotomy, viz: *muscular retraction.* When this does not exist, the operation is never followed by the expected result. Muscular retraction generally manifests itself by a tension and hardness of the tendon, or even of the muscle, without the means of tracing in the retraction of the limb, or in the part to which it is attached, the cause of this muscular action. There are some muscles in which this preternatural tension cannot be felt, owing either to the position which they occupy, as in the cavity of the orbit, or to the smallness of their volume, which prevents its being detected through the surrounding parts. The retraction can then be detected only by the altered situation of the part, or by a derangement of its motions. Tenotomy is applicable only to *permanent* retractions, and never to *spasmodic* or *intermittent* retractions. The *retraction* of a muscle must never be confounded with its *shortening*. To convince ourselves of the importance of an error of this kind, it is only necessary to consider one of the affections for the relief of which the operation is resorted to—the *telipes equinus*. A sound man may voluntarily retract the gemelli muscles, so as to raise the heel to the height which it generally attains in this affection, accordingly there is no evidence that the tendon in this affection is shortened; it is only retracted, and tenotomy occasions this morbid retraction and rigidity of the tendinous fibres to disappear, without its being necessary to elongate the tendon Moreover, great inconveniences would result from such an elongation; the patient might place his heel easily upon the ground; but as the tendon would be too long, there would be the greatest difficulty in raising his foot from the ground, and his step would be uncertain and defective. Dr. Neumann states, also, that it is necessary to distinguish the morbid retraction which is seated in the muscles from that which occurs in the aponeuroses, ligaments, or membranes, the latter never presenting conditions identical with those of the former, but consisting, on the contrary, in a *true shortening*. The author establishes two classes of the cases which require tenotomy—1st, those which he calls *general*, and which may develop themselves in all, or nearly all parts of the body; and, 2d, those which are *special*, or occur in certain parts only. The first class comprises paralysis and ankylosis, when attended with permanent retraction of the muscles; in the second class the author places strabismus, ptosis, stiff-neck, club-foot, and the like.

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* Mém. de l'Acad. de Méd., 1838, t. vii., p. 438.

† Casper's Wochens., Nos. 4, 5, 1845.

The author differs from M. Guerin in the important question, whether, when many muscles are retracted, they should be operated on at one and the same time, or at intervals. He considers that when the muscles belong to the same part, or to a particular articulation, as in deformities of the feet, they should all be divided at the same sitting; but there is always considerable re-action when many muscles belonging to different regions are divided at the same time. An interval of about eight days is necessary, according to the author, before a second operation in a different part of the body is undertaken; and at the expiration of three weeks the operation may be repeated, at the same site where the first trial has been unsuccessful.

Tenotomy should never be practised, according to the author, on children under a year old; and we ought never to operate for strabismus under the age of eight or ten years, because the resources of nature frequently overcome this deformity. In club-foot, the operation should never be performed before the age of twelve years, since a cure may sometimes be obtained by machinery and gymnastic exercises. Tenotomy may be performed with advantage until the age of 40, or even 60 years; but beyond this period the rigidity of the muscles supersedes the beneficial results of the operation.

Inflammation of a retracted articulation is a contra-indication to tenotomy. In fact, the retraction of the muscles, which should be the sole obstacle to the re-adjustment of the limb, indicates, on the contrary, in the case of inflammation, a deep-seated affection of the hard parts; and in those which appear the most favorable cases, relapses are always to be expected; *à fortiori*, when the surface of articulations presents large cicatrices adherent to the subjacent muscle, and when the individual is the subject of particular inveterate diatheses, the operation is inadmissible.

As remarked by the editor of the "Archives Générales,"* these cannot be accepted as established principles until they are confirmed by a much larger number of cases than are at present before the profession.—*Ranking's Abstract.*

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* Sept. 1846, p. 97.

MEDICAL PATHOLOGY AND PRACTICAL MEDICINE.

On the Antagonism between Typhoid Fevers, Intermittents, and Phthisis.—By M. BOUDIN.—The following summary of M. Boudin's conclusions on this subject are given in a recent number of the *British and Foreign Review.* The facts are simple, and the sources from whence they are obtained sufficiently accurate to justify a reliance on the statements.

1. Those localities in which the producing cause of endemic intermittents thoroughly modify the constitution of man, are remarkable for the infrequency of pulmonary phthisis and typhoid fever. 2. The localities in which pulmonary phthisis and typhoid fever are particularly prevalent, are remarkable for the infrequency and mildness of intermittent fevers contracted on the spot. 3. The drying up of a marsh, or its conversion into a lake, diminishes or prevents intermittent fevers, but seems to dispose the organism to a new series of diseases, in which pulmonary phthisis and (according to the climate) typhoid fever are particularly prominent. 4. After a residence in a thoroughly marshy locality, an individual enjoys an immunity from typhoid fever, the degree and duration of which is in direct proportion, first, to the length of the previous residence; second, to the intensity of the fevers proper to the locality, considered under the two-fold relations of form and type; third, or, in other words, that a residence in a country of remittent and continued fevers, such as certain points of the coast of Algeria, and the centre of the marshy part of Brasse, is more prophylactic against the disease referred to, than, for example, a residence near the marshy embouchure of the Bievre, at Paris. 5. The conditions of latitude and longitude, and of height (above the sea) which limit the manifestation of marsh fevers, equally limit the curative or prophylactic influence of the marsh miasm. 6. Lastly, certain conditions of race, and possibly of sex, diminish the susceptibility of the system to the cause of marsh fevers, and in equal degree diminish the therapeutic influence of that cause.

The subject of which M. Boudin treats has considerable practical value in the distribution of troops, and in the hygeine of those predisposed to consumption.—(*Lancet.*)

On Cholera.—By Dr. MAXWELL, Surgeon to the 3d Reg. Madras Light Cavalry.—[Dr. Maxwell finds that Cholera is produced by the same causes as intermittents; and that it generally follows great changes of climate and temperature. It prevails most in malarious localities, and is indeed closely related to fever and dysentery. As prophylactic measures, Dr. M. enumerates,]

Regular and moderate living. Avoidance of all excessive fatigue, and especially subsequent exposure. The body to be well clothed in flannel shirt from the neck to the pelvis. The exhibition of quinine and other tonics and antiperiodics.

Principles of Cure.—Vomiting being the first symptom, it is to be carefully and diligently encouraged with copious, bland, warm, or hot diluents, as barley-water, or other mucilaginous drinks, to assist nature in throwing off the congestion; in other words, to assist her in escaping into the febrile stage. Narcotics, especially in large doses, to be avoided. I consider that they paralyze the nerves, and interfere with the operations of nature. The surface to be constantly rubbed dry with flannel, and the throat, back, and chest to be covered with the same material. Should, at the same time, a febrile re-action not have shown itself (known by a slight shivering or desire to be covered up), then the epigastrium is to be rubbed unremittingly with the liquor lyttæ, till the patient is fully sensible of its action; then an emplastrum lyttæ is to be applied to that part, and the abdomen and loins enveloped in a flannel roller, well applied in several convolutions. The only hope depends on the blister being well and properly applied. I have tried boiling water and the actual cautery. I found them too violent, and fail. If the thirst continue, it may be relieved by effervescing draughts of bicarbonate of soda and citric, or tartaric acid, *ad libitum*. At the same time, the respiratory apparatus must be attended to; and if the dyspnœa is urgent, with a sense of suffocation, general and topical bleeding must be had recourse to, according to the urgency of the symptoms, guided by the judgment of the practitioner.

Leeches to the cardiac region should never be lost sight of, as well as to other parts of the chest. The symptoms requiring bleeding and leeches may make their appearance from the first, or they may arise at any period of the disease. They require to be narrowly watched. They are often known by a tendency to coma, as if the cerebrum were *alone* affected. Should the dyspnœa continue, and appear to proceed from participation of the recurrent nerves, and the larynx be more especially affected, then the liquor lyttæ must be well rubbed in, till its effect is produced, and an emplastrum lyttæ well applied with a flannel roller.—(*Med. Times.*)

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Effects of Etherization upon Respiration.—M. Ville furnishes a statement of researches undertaken by himself and M. Blandin, on etherization, at the "College de France." They desired to study only the act of respiration during that singular state; and, as though nothing can be foreseen in these singular phenomena, they have discovered the opposite to what they expected. Indeed, in that state of complete insensibility in which sight is abolished, in which the cold limbs have lost all power to move, respiration produces more carbonic acid than when the organs are in the full exercise of their natural functions. During etherization the carbonic acid produced by respiration increases as the sensibility diminishes, and lessens as this returns. The following are the results of a number of these experiments:

	Carbonic acid produced during normal respiration.	Carbonic acid produced during insensibility.	Preparation of ether contained in the air inhaled.	Duration of inhalation.
No. 1.	2,41	4,84	6,70	22′30″
2.	3,05	4,38	2,17	
3.	2,79	3,11	12,	4′
4.	1,36	3,32	12,68	4′
5.	2,04	4,42	14,11	2′30″

[*Trans. from Gaz. Méd. de Paris.*]—*South. Jour. Med.*

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On the Frequent Occurrence of Alkaline Urine in Health, and the Errors of Diagnosis occasioned by a Want of Knowledge of this Fact. By Dr. KRUKENBERG.—The fact, first promulgated by Wohler, that the internal use of salts of vegetable acids and fruits containing them, causes the urine to be secreted alkaline, has been too much neglected by succeeding physiologists and pathologists. Our author found that a much smaller quantity of fruit was necessary for the production of this phenomenon than has hitherto been supposed, viz.—2 to 4 oz. of apple pulp, or 12 plums, weighing without the stones scarcely 1 1-2 oz., sufficed to make the urine alkaline and hazy from phosphates, or if clear on excretion, heat caused their deposition; the addition of a little hydrochloric acid caused an effervescence like champagne; too much liquid, a bladder already filled with acid urine, or a disproportionate allowance of flesh, interfered with the success of the experiment. How often are those ill of chronic complaints who use a moderate diet, and with whom fruit is a useful and favorite article, troubled with hazy and alkaline urine, causing anxiety alike to themselves and their physician, which a little physiology does away with. In the simple chronic nephritis of Rayer, the chief symptom is the alkalinity of the urine; in no case was there a sectio cadaveris; and some of the cases recovered so quickly, as to justify a doubt as to the correctness of the diagnosis; although he inculcates careful dietetic treatment, it is evident from his work that the semiotic influence of fruit in small quantities was unknown to him. This article is not forbidden at La Charité, and friends of the patients often carry them some. In several of his cases the alkalinity of the urine seemed to depend on purulent admixture, and consequent rapid putrefaction; and in one it seemed to be kept up, if not produced, by the use of an alkaline saline water (Contrexeville). The alkalinity of the urine has also been used by Prout as a diagnostic sign of certain spinal affections. These he divides into two great classes:—1st. Those arising from depressing emotions and weakening influences; and in these he recommends the use of fruit, and fluids containing malic acid, as cider and perry; to these, and not to any disease, our author refers the alkalinity of the urine. 2d Injuries of the spine; our author states, that neither Rayer nor himself had ever been able to observe the urine alkaline in cases of injuries of the spine, unless there were some existing or consecutive affection of the mucous membrane of the urinary passages, producing purulent admixture, hastening thereby the putrefactive changes in the urine. In the three cases detailed by Prout, two had stricture of the urethra, and the third retraction of the testicle, and a mucous sediment—all bespeaking the existence of some such affection. A microscopical examination, by showing the existence or absence of pus-cells in the urine, would have confirmed the diagnosis, or at once corrected it. How far inattention to diet may have led to error, cannot be specified. Prout also mentions, without explanation, what has already been referred to, viz. That although alkaline urine, by copious secretion, be clear and bright, yet boiling causes it to deposite a phosphatic sediment, which falls without any such previous process, if the secretion be more sparing; the phosphates separate before the boiling point, and from their great specific gravity fall rapidly, and may thereby, as well as by their solubility in acids, be distinguished from the albumen found in Bright's disease.—*Month. Jour., Aug.*, 1847.

Treatment of Dyspeptic Headache. By GEORGE CHAPLIN CHILD, M. D.—[We have extracted the following practical remarks from a work which we shall further analyze in our Report. They embody the views of a man who has evidently had considerable opportunities of studying dyspepsia, and its various forms. He observes that:]

There is, perhaps, no single dyspeptic symptom that causes greater suffering than headache, or of which patients are more anxious to be relieved. Many apply on account of headache solely, without suspecting that it depends on a disordered stomach; and others, although aware of this, know also that the radical cure of their complaint is likely to occupy a considerable time, and they would, therefore, feel grateful if some palliative could be devised meanwhile to lessen present suffering.

The headache following a debauch in eating and drinking, seldom requires any special treatment, provided the stomach were previously in a sound state. The erythema of the mucous membrane subsides within forty-eight hours, and with it the symptomatic headache. In slight cases, if the headache be attended with collapse and debility, a little food or a dose of sal volatile in some aromatic infusion often does good.

After gross dietetic errors in persons whose stomach is already in a morbid state, the headache is apt to last for several days, and to be accompanied with various febrile symptoms. The gastric mucous membrane is, in fact, acutely inflamed; and should there be nothing to contra-indicate it, the best treatment is to apply six or ten leeches to the epigastrium. When the headache has persisted for any considerable period, it may bring on determination of blood, and it may then be advisable to cup or leech the nape of the neck, or to apply leeches to the feet, and afterward promote bleeding and revulsion by hot pediluvia.

In violent gastric and bilious headache, and in those where there is throbbing, cold applications, as bags of ice, are extremely useful, and at the same time, grateful to the patient; or the forehead may be occasionally moistened with a lotion containing one part of acetic ether diluted with four parts of water: ether alone, to produce the full refrigerant effect, or combined with some anodyne, as tincture of aconite.

As the primary irritation in the stomach arises from food acting on morbidly-sensitive nerves, it is always necessary to remove the exciting cause, as far as practicable, by enjoining a spare and bland diet. The undue sensibility of the stomach, as well as the predisposition to secondary pain in the nerves of the head, ought likewise to be temporarily blunted by anodynes. Of these, the extract of belladonna (gr. $\frac{1}{6}$ to $\frac{1}{4}$), or of henbane (gr. iij.), with ipecacuanha (gr. $\frac{1}{2}$), made into a pill with confection of roses, and given thrice daily, is the most useful.

In London, and probably in all large towns, the most frequent cause of headache is bilious congestion, to relieve which no remedy equals an emetic, as it strikes at the root of the disorder by thoroughly unloading the liver. This plan of treatment is nearly always admissible, for it is a mistake to suppose that an occasional emetic permanently weakens the stomach even of a dyspeptic. An emetic, however, is now an unfashionable remedy, and, what may be fairly allowed to have more weight, it is certainly a most disagreeable one. When, therefore, from this or any other reason, it cannot be given, our next best plan is to excite brisk action of the bowels, and thus drain off from the liver the suppressed or pent-up bile. At the same time, patients should be warned that drastic purgatives attain the proposed end only by the irritation they produce, first in the stomach and then in the duodenum and bowels, and that this excitement cannot fail to do mischief in cases of dyspepsia. Not only do drastic purgatives cause more irritation than an emetic, but they also unload the liver less effectually. The action of the latter is soon over, and one of its chief advantages is, that it obviates the necessity of giving large quantities of strong physic. All purgative medicines do not seem equally efficacious in procuring the downward evacuation of the bile. The best are calomel (gr. iv. to vj.), compound extract of colocynth (gr. x.), compound powder of jalap (ʒss.), and sulphate of manganese (gr. x.), in half a tumblerful of water. When this last medicine does not produce sickness, it may be given for several days in succession without inconvenience, as its cholagogue power is great in comparison to its drastic properties.

The headache, observed in some dyspeptics, may be either entirely excited, or aggravated, by uterine irritation. I have the notes of several cases of indigestion before me, wherein the patients were not liable to headache at all, except just before the monthly periods. The same fact may be remarked in menorrhagia, and in other diseases of the uterus attended with irritation. If amenorrhœa be conjoined with dyspepsia, the headache will probably be worst at the time when the catamenia ought to appear, which is often marked by what is called a molimen, or effort of nature to bring on the secretion, denoted by feverishness and an increase in the uneasy sensation usually felt—namely, pain in the back, abdomen, etc. The application of from two to six leeches to the groin, at this particular period, often causes the discharge actually to appear, and in other cases proves so good a substitute for it, as to relieve nature, and cut short the headache. Warm stupes across the abdomen ought to be perseveringly employed.

When headache is complicated with plethora, or determination of blood to the head, leeching or cupping at the nape of the neck may be necessary.—The excess of blood, however, is often local only; or, on the contrary, the absolute quantity of it in the body may even be below the healthy standard. In such cases, it may be of consequence to avoid depletion, and it will generally be found that the lost balance may be corrected in the circulation by dry cupping and blisters, or other modes of counter-irritation applied to the epigastrium, together with synapisms to the legs, and hot pediluvia.—*Ranking's Abstract.*

On the Use of Opium in Inflammation.—By W. H. Ranking, M. D., *late*

Physician to the Suffolk General Hospital.—The legitimate sphere of action of *opium* in the treatment of inflammatory diseases, is, we conceive, a point upon which our notions have arrived at tolerable precision. Under whatever modifications of individual circumstances attending such diseases the beneficial action of opium is observed, one well-marked morbid condition has, according to my observation, existed in every case, and that is an excitement of the nervous system, altogether disproportionate to the exaggeration of vascular action. This excitement is not shown in the existence of spontaneous pain alone, as we know that that symptom may be insignificant, or altogether absent, in instances of the most extensive and destructive inflammation; neither is it shown mainly by increased sensibility to local impressions. The excitement to which I allude, exhibits itself in disorders of the sensory and motor functions of the nervous system chiefly, and consists in watchfulness, or transient delirium, irregular respiration, and especially in restlessness and jactitation. In this condition of things, whatever be the violence of the local inflammation, or whatever organ be affected (excepting the brain in some instances), opium is imperatively called for. In other words, whenever, during the existence of inflammation, symptoms indicative of a loss of balance between the nervous and vascular systems exhibited themselves, sedative medicines are demanded in doses proportionate to the nervous preponderance.

This want of balance declares itself, I believe, chiefly under two conditions—1st, the existence of inflammation in a constitution naturally excitable, or in which the general powers have been reduced by the disease itself, by treatment, or by contingent circumstances relating to food, air, etc.; and, 2d, in inflammation of organs or tissues, the implication of which induces a state of things more or less approaching to that condition which, for want of a better term, we are in the habit of calling *shock*. In illustration of the first division, we may mention inflammation occurring in the hysterical constitution. In these cases, the phenomena which depend upon irritation of the nervous centres, take so decided a lead in the symptomatology of the case, that until they are controlled by opium, or some, under certain circumstances, more appropriate sedative, the inflammatory symptoms proper do not display themselves with their characteristic features. Again, inflammation may attack an ill-fed or previously-debilitated individual; or the inflammation may have been too actively combated by bloodletting, mercury, etc., without reference to the deficient resiliency of constitution, which, in children more particularly, may lurk behind an appearance ostensibly robust. In these cases there may exist from the first, or there comes on assuredly at no distant period, a condition in which opium becomes necessary to save life, to prevent, in fact, in the latter case, the anomaly of the patient "dying cured."

Under the second class of cases in which opium becomes a necessary part of the treatment, or is even mainly to be relied on, is inflammation of an organ or tissue largely supplied with ganglionic nerves, and in which, for this reason, the nervous system requires a large share of attention in the treatment of the case. Such is peritonitis or enteritis, either idiopathic or secondary; such are, also, one form of delirium tremens, diffuse cellular inflammation, and more particularly, phlebitis, the inner membrane of veins having the closest analogy to serous membrane in many respects, but especially in its large supply of organic nerves. In all these inflammations, the usual battery of antiphlogistics is worse than useless, unless combined with the liberal exhibition of opium.

The symptoms either existing *ab initio*, or, as is more commonly the case, coming on in the course of the disease, which indicate the necessity for opium, can only become familiar to the practitioner by clinical observation; but, as far as written descriptions can be relied upon, it may be stated, that the broad expression of this condition consists in a failure in the power or regularity of the pulse, pallor of the countenance, moist skin, (but not in all cases,) tendency to incoherence, with restlessness, sleeplessness, and in an aggravated form, jactitation. This is the broad outline, so to speak, of the state referred to, but it declares itself in minor degrees, with which experience alone can render us familiar, and the appreciation of which is in itself sufficient, in many cases, to make the difference between a successful and an unsuccessful practitioner; for to persevere in antiphlogistic treatment, or to withhold opium, when these indications offer themselves, is to destroy the patient.

In the exhibition of opium when these symptoms show themselves in inflammation, I know of no drawback, no contra-indication, which should weigh for one moment against its paramount necessity. Be the skin sweating or dry, the tongue moist or dry, the bowels constipated or not, opium must be given. The constipated bowels, which are regarded by some as inducing the necessity for hesitation in the use of the medicine, I look upon as of the least importance in the generality of inflammations; in some, as in enteritis, a quiescent state of the bowels is even needful; and were it not so, the probability is, that if the case has been properly managed at first, such a clearance will have been effected as will render any risk from accumulation comparatively small.

[On the same subject Dr. Durrant observes:]

"The treatment of internal inflammation by opium," is an important practical subject, and one which I trust that we shall, sooner or later, see discussed in the pages of the '*Provincial Journal*,' by not a few only of its many talented contributors. Without entering upon the theory of the action which opium exerts upon healthy and diseased organs, I can most fully assent to the opinions which have been recently expressed by Drs. Chambers and Ranking, in reference to its utility in the treatment of many cases of acute internal inflammation. The power of allaying pain, subduing nervous excitability, and thereby reducing the irritability of the heart's action, peculiarly belongs to this drug, and however difficult or impossible it may be to instance, by writing, those particular conditions in which its adoption is so generally followed by benefit, still, how vividly will the reflecting physician, unshackled by hypothetical notions, revert to the satisfactory results which in his hands have attended its use!

In the selection of the cases most requiring the opium treatment, as also the precise period at which this medicine is called for (and this is all-important,) medical tact and observant experience can alone direct. A volume upon the subject would, in many instances, utterly fail to indicate the peculiar circumstances requiring opium, but in which to give it is recovery to the patient,—or to withhold it is probable destruction; and who cannot call to mind the look of gratitude beaming in the countenance of the sufferer relieved, if not rendered out of danger, by the timely and judicious exhibition of this valuable drug? Independently of those diseases in the treatment of which opium is commonly prescribed, as delirium tremens, and some other nervous affections, there exist others, in which at one period or other of their course, the exhibition of opiates is attended with the happiest results.

In the second stage of pneumonia, if the cough be constant and harassing, the expectoration scanty, and the countenance anxious, with an exalted state of nervous sensibility, full doses of opium at bed-time often act like a charm. In pleurisy, prior to effusion, the same medicine administered at night, giving mercury *per se* during the day, is equally valuable. If effusion obtain, the balance of the circulation is often so much interfered with, that the propriety of opium, in these cases, becomes questionable. In rheumatism, the best effects result from opiates; but in this disease, as in pleurisy, I believe that more benefit will be derived from administering opium in full doses at night, with mercury during the day, instead of the more common practice of combining the two remedies. In croup, also, in lymphatic children, after the urgency of the symptoms has abated, opium to prevent spasm is often imperatively called for. In peritonitis, enteritis, diarrhœa, and dysentery, opium judiciously used is invaluable.

The forms which I myself prefer are the crude opium and the muriate of morphia.

In reference to the constipating effects of this drug upon the bowels, I do not regard it as any reason for withholding its use. In enteritis and peritonitis, it becomes often of paramount importance, while allaying pain, to ensure quietude in the intestinal tract; and not unfrequently shall we find obstinate constipation attended with, and perhaps produced by spasm, effectualy relieved by the free administration of opium. Within the last few weeks, I have witnessed the most decidedly beneficial result obtained from the exhibition of opium, in strangulated irreducible hernia, for the relief of which neither the patient (a female, aged 64) nor her friends would sanction an operation. After all other measures had been adopted by the Surgeon in attendance, without avail, and repeated stercoraceous vomiting taking place, a grain of solid opium was administered every two hours, with the effect of not only allaying the vomiting, but also (after half a drachm had been taken) of inducing free and repeated evacuation of the bowels, which function had not previously been performed for fourteen days. The patient, although relieved from the consequences of the hernia, ultimately sank from exhaustion, the friends pertinaciously refusing a *post-mortem* examination.

In thus briefly advocating the powers of opium in the treatment of internal inflammation, I must again repeat, that it is clinical observation alone that will suffice to demonstrate, in many instances, the particular time and circumstances by which its exhibition must be regulated. When calculated to benefit, the relief which it affords is often immense; while, on the contrary, if given under disadvantageous conditions, its injurious effects may be irreparable.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

Treatment of Placenta Prævia. [Dr. West's Report on Midwifery.]—Seventeen instances have been recorded in the English journals during the past fifteen months, of detachment of the placenta before the birth of the child in cases of placenta prævia. In the case recorded by Dr. Simpson, to whom it had been communicated by Mr. Cripps, the placenta was removed by an ignorant midwife, and ten hours elapsed before the child was born, during which time, however, no hemorrhage took place. In 16 out of the 17 cases the bleeding is said to have ceased immediately on the detachment of the placenta; but Dr. Everitt mentions that, although the flooding abated on the separation of the placenta, it did not entirely cease until after the application of cold externally; and he insists on the fact as proving that in cases of this kind the hemorrhage comes from the uterine as well as the placental ends of the lacerated veins. The life of the mother was preserved in every case but one, and then the previous hemorrhage had been so profuse as almost to exhaust the patient, who died three hours after delivery. All the patients were still-born, except in the case related by Mr. Stickings. [As far as the well-doing of the mother is concerned, the results of these cases must be regarded as favorable; but, on the other hand, the lives of 17 out of 18 children were sacrificed, at least half of whom would probably have been saved by the ordinary practice. In many instances, too, there appears to have been no reason why the child was not turned and extracted first, the os uteri having been well dilated or yielding and dilatable. In such cases it seems not unfair to assert that the child's life was sacrificed to the desire of performing a new operation. Several of the cases are so loosely worded that little can be gathered from them, while some have either been so carelessly observed, or so incorrectly related, as to render them quite untrustworthy.]—*Lond. Med. Gaz.*, *Mar.*, 1847.

Spontaneous Evolution. By Dr. Keiller. (Monthly Jour. July, 1847.) When this subject was brought before the Edinburgh Obstetrical Society at its last meeting, Dr. Keiller remarked that a striking instance had occurred to him when practising in Dundee. He had seen the patient early in the labor, but was obliged to leave her in the hands of a midwife, who, being a friend of the patient, had volunteered her attendance as a sick-nurse.

Dr. K. was not again summoned until the case had assumed the following aspect:—The liquor amnii for several hours discharged, a large swollen arm occupying the passages, the os uteri firmly grasping the obtruded shoulder of the child, and the uterine contractions unusually violent and continuous, a state of matters that had, in all probability, been encouraged if not induced, by large doses of the ergot of rye, which the "*midwife*" confessed had been administered for the purpose of bringing the case to a speedy termination.

Dr. K. failed in his repeated attempts to insinuate his hand into the uterus in order to complete the delivery by the operation of turning; notwithstanding the free use of opium, the uterine contractions continued for some time excessively severe, when, during a violent pain the arm was suddenly withdrawn from the passages, and the feet and body were almost simultaneously expelled, a rapid and complete evolution having spontaneously occurred. The child was of course dead. The mother made a good recovery.

Dr. Keiller farther stated in connexion with this case, that he had attended a *twin sister* of the patient in three of her confinements, in two of which the *placenta* presented, demanded turning, and in her third accouchement the breech was the form of presentation.

Auscultation in Labor. By A. H. McClintock, M. D. (Dub. Quar. Jour., Aug., 1847.)—I shall now briefly sum up, in the form of aphorisms, the chief points of practical interest contained in the preceding memoir, first reminding the reader that upon each point I only speak with that degree of confidence which my personal experience and observation warrant.

1. Where the fœtus is alive, the sounds of its heart may be always detected at some period of the labor, by any one of ordinary proficiency in obstetric auscultation.

2. The precise region of the abdomen in which the fœtal heart is heard, affords auxiliary evidence of the position of the child *in utero*, but can never be relied on alone for determining this point, or supersede the necessity for vaginal examination.

3. In presentations of the lower extremities, whether it be breech, foot, or knee, the fœtal heart is usually heard most distinctly in the vicinity of the umbilicus of the mother.

4. Conclusive auricular evidence of the existence of twins *in utero* is only to be drawn from the inequality of the number of the beats of the two fœtal hearts, and not merely from any difference as to their respective positions.

5. If, in the course of a tedious or difficult labor, the fœtal cardiac sounds, from having been distinct and clear, gradually become feeble and obscure, and ultimately inaudible, even with every precaution against deception, under these circumstances, their absence is entitled to rank as positive evidence of the child's death; but without the previous successive examinations this conclusion would be destitute of any positive character.

6. In cases where ergot of rye has been given to hasten delivery, auscultation of the fœtal heart is the only certain way by which we can know when the medicine is commencing to exert an injurious influence upon the child; consequently the stethoscopic indications are alone entitled to confidence for determining the exact time when the state of the fœtus calls for and justifies interference.

7. In cases simulating rupture of the uterus, the persistence of the fœtal heart's sound is a strong proof against the occurrence of the accident, and the more advanced the period at which they are audible after the setting in of bad symptoms, the more conclusive is the evidence that rupture has not taken place; whilst on the other hand, the sudden cessation of the fœtal pulsations, where they had been distinctly audible a short time previously, would strongly corroborate other existing symptoms of laceration of the uterus.

8. After an attack of puerperal convulsions in the seventh or eighth month of pregnancy, where labor has not immediately supervened, the prognosis should be very much regulated by the state of the fœtus; for if it be proved by the stethoscope that the child is alive, we may venture to hope that gestation will go on undisturbed (unless the convulsions recur); whereas, if the child has been destroyed, its expulsion will take place, most probably, in ten or fourteen days from the date of the convulsive attack.

9. No certain conclusion regarding the state of the fœtus can be drawn from the characters of the placental soufflet.

10. In cases of flooding before delivery, observation of the placental bruit may supply useful diagnostic information, by pointing out the part of the uterus to which the after-birth is attached, and thereby showing whether the hemorrhage be accidental or unavoidable.

11. Auscultation of the heart in still-born children more accurately acquaints us with the state of the child's vital powers, than any other source of information, and is, therefore, well deserving of employment in all such cases.

Cause of Mortality in Still-born Children. (Ranking's Report in Abstract, January to July.)—The causes of deaths in still-births, with the means of preserving the infant's life, have been made the subject of an ingenious brochure by Dr. Richard King, in which the author endeavors to show that the mortality arises from syncope, and not from asphyxia, as is commonly thought to be the case; and that the great danger to be dreaded in tedious or abnormal labors is not the compression of the cord so much talked of by accoucheurs, but its non-compression; so that the fœtal blood, as the placenta becomes detached, is, as it were, sucked up by that body, and the child is in fact thus, to all intents and purposes, rendered ex-sanguine. The treatment which the author suggests, as indicated by this theory, is the compression of the cord under certain circumstances, so as to prevent the possibility of that congestion of the placenta which he regards as the active cause of the death of the still-born infant. The arguments upon which the author founds his opinions are selected with judgment, and the work is altogether worthy of the best attention of the obstetrical practitioner.

Statistics of Midwifery. (Ranking's Abstract, January to July, 1847.)—"Maternal Mortality in seventy-two cases of placental presentations, noted by Dr. Lee.

Reporters.	No. of cases reported.	No. of mothers lost.
Dr. Clarke, - -	14	1
Dr. Collins, - -	11	2
Dr. Ramsbotham, -	19	8
Dr. Lee, - -	38	14
	72	25

"Hence, according to Dr. Lee's collection of statistics, the maternal mortality in unavoidable hemorrhage, amounting to twenty-five in seventy-two cases, is rather more than one in three. And this evidence of Dr. Lee will probably be regarded as the stronger, seeing that it is totally unprejudiced in its character; for, in 1845, Dr. Lee called into doubt the accuracy of all collections of statistical data made by others, and which led to the idea that the general maternal mortality in unavoidable hemorrhage was so great as to approach one in three. At that time he was, I believe, unaware of the general result of his own previously-published collection of statistical data relative to the point in question.

Midwifery Statistics.—The following statistical record of 21,804 midwifery cases has been drawn up by Professor Schwerer. Of these 20,610 were presentations of the head; 50, face; 97, breech; 116, feet; 3, knees; 250 were twin cases; 1, triplet; 153, cross-births; 118, abortions; 127, premature; 258, still-births; 21, monsters. Total, 21,804 cases.

Manual interference was required in 1556 cases. Version was performed 183 times, in 76 of which the mother and child were saved; in 93 the child was lost, and in 14 the mother. Spontaneous evolution occurred twice. The forceps were applied in 194 cases; with success both to mother and child in 139; with death of the child in 48, and of the mother in 7 cases. The necessity for the forceps was occasioned by the size of the head in 48 cases; by pelvic deformity in 20; by deformity of the soft parts in 3; by accidents in 123.

Dr. Robert Lee has published a table of 59 cases of placental presentation, in which the general mortality to the mother amounted to 15, or 1 in 4. In 11 of these the presentation was complete. In 34 of these turning was performed; with success in 23; unsuccessfully in 11. The placenta and child were spontaneously expelled in 5, all of which recovered; in 1 only is the hemorrhage mentioned as continuing after the expulsion of the placenta.

Abortion, and Menstruation during Pregnancy.—[Mr. Whitehead, in a recent work on the Physiological and Morbid Conditions of the Uterus and their relations to the Treatment of Abortion and Sterility, when treating of Abortion, lays down the three following positions from the cases narrated:]

1. That what is commonly called ulceration of the cervix uteri may be the predisposing, as well as the immediately exciting cause of abortion.
2. That the purulent product of uterine ulceration, under some forms, at least, possesses virulent properties, capable of producing disease in another individual, or in another part of the same individual by inoculation; and probably capable also, by being absorbed into the circulation of the same person, of materially disordering the fluids, and of creating thereby a peculiar susceptibility to disease.
3. That the application of caustics to the uterus, and the employment of other active measures which I have heard practitioners object to during pregnancy, as likely to endanger the well-being of the offspring, may not only be safely administered, but that they constitute in fact one of the principal means of securing both mother and child from danger.

[In relation to menstruation during pregnancy, the following are his conclusions:]

1. That menstruation during pregnancy is, for the most part, perhaps always, associated with an abnormal condition, generally with ulcerative disease of the uterus, requiring at all times active remedial treatment.
2. That hemorrhage during pregnancy is not necessarily associated with an altered relation of the parts within the uterus, and, by timely care, need not interfere with the integrity of the ovum.
3. That menstruation, during the early periods of lactation, is not always natural menstruation, but that it is generally associated with morbid conditions which are amply adequate to the satisfactory explanation of the phenomenon; that secondary hemorrhage is, in the majority of instances, not owing to imperfect contraction, or atony of the uterine fibres; and that the discharge very probably proceeds, under these circumstances, not from the inner surface of the uterus, but from the diseased surfaces, situated upon parts external to the cavity of the organ.

Case of Utero-Vesical Fistula—Novel Means of Relief.—Mr. Isaac Harrinson brought before the Reading Pathological Society the case of a woman, aged 41 years, who, thirteen days after a protracted labor, (which had to be completed by instrumental aid,) begun to suffer from a flow of urine from the vagina, not a drop passing through its natural outlet. This state had continued, to the patient's great torment, for five years previous to her coming under Mr. Harrinson's care. After repeated examinations with the speculum, the only exact information the author could obtain was, that the urine issued from the os uteri; how it came there he was unable to determine, and had almost given it up in despair, when, exploring with a small catheter in the bladder, with the concavity downwards and a finger in the os uteri, the catheter and the finger came in contact. The problem was now solved; there was a communication between the fundus of the bladder and the cervix uteri, about three-quarters of an inch within the cervix, just at its internal orifice, and as large as to admit readily a No. 6 male catheter. After making one of these examinations, a circumstance occurred which confirmed the author in a plan he had devised for the relief of the disease. For the first time for five years she remained dry for two hours; no dribbling took place, and she then passed water in a stream. This arose, he imagines, from the tumefaction of the edges of the fistula producing temporary closure of its orifice. In July, 1841, he acted upon his plan, by proceeding to operate in the following manner:—A Brodie's catheter, armed with a long piece of twine, was introduced into the bladder, concavity downwards; and being guided by a finger within the os uteri, he readily found the rupture, passed the instrument through the vagina, seized the thread, and then withdrew the catheter, thus leaving one end of the thread hanging from the urethra, and the other from the vagina. To the urethral extremity he tied a skein of six threads of glovers' silk, oiled them, and drawing at the vaginal extremity, dragged the silk through the fistula, and then tied the urethral and vaginal ends together. The result was most gratifying. From the time of their introduction to the withdrawal of the last thread, no dribbling took place, except when the patient was using some extraordinary bodily exertion; and under these circumstances it did sometimes occur. On the 4th day after the operation, irritation beginning to be produced, the first thread was withdrawn; on the 5th the second; on the 6th the third; on the 10th the fourth; and on the 17th the fifth, leaving only one remaining;—so that in seventeen days the operation may be said to have been completed. During this time considerable irritability of the bladder existed, with great impatience of its contents, so that they were obliged to be evacuated every hour. This symptom, however, gradually subsided simply with fomentations, and without the aid of any medicines. At each recurring menstrual period the urine was, and now is, voided highly charged with the catamenial fluid. During the three subsequent months Mr. Harrinson changed the size of the thread three times, so that at last it was reduced to as small a one as could be procured compatible with any strength and durability. In October the narrator withdrew the last thread. Unfortunately he was disappointed: in twenty-five days the dribbling was as bad as ever. Mr. Harrinson was glad enough, therefore, to retreat to his former position, by introducing now four large threads. In twenty-eight days they were reduced to one, and the patient was herself again. Mr. Harrinson has purposely delayed the publication of the case, in order to test the sufficiency of the means employed. He is pleased to add (May, 1845,) that she remains in the same comfortable state. She changes the thread herself once in three or four weeks, goes about, performs her domestic duties, &c., with no inconvenience. Not a drop of urine has escaped for the last three years. The only precaution necessary is, that the thread be drawn down once a day, to cleanse it from the sabulous matter which is deposited upon it.—*Abridged from the Provincial Med. and Surg. Journal.*

MATERIA MEDICA AND PHARMACY.

Camphorated Blistering Ointment.—M. Mialhe, in an article published in "*l'Union Médicale,*" upon Epispastics in general and Cantharides in particular, establishes the following principles:

1st. That the most active epispastics should be preferred; 2d, that epispastic plasters should not be allowed to remain in contact with the skin any longer than is absolutely necessary to effect the detachment of the epidermis; 3d, that the addition of camphor to blisters is of acknowledged usefulness, and ought to be generalized. The action of cantharides upon the bladder is lessened in proportion to the rapidity with which the serous exhalation is produced, because there is less cantharidine absorbed. By the addition of camphor, which has the property of softening resins, the blistering ointments are made more fluid, they adhere better to the skin, and consequently act more promptly. Among the means proposed to prevent the specific action of cantharides upon the bladder, none is so good as that indicated by M. Bretonneau, which consists in the interposition between the plaster and the skin of blotting-paper dipped in olive oil; the cantharides being soluble in unctuous bodies, the olive oil facilitates its introduction into the system, but this introduction diminishes as soon as the serous effusion takes place, inasmuch as oils are not miscible with aqueous fluids. Hence by this method the irritating influence of cantharidine upon the urinary organs is rarely felt. The following is M. Mialhe's formula:

℞. Cantharides, - - - - - -	400 parts.
Hog's Lard, - - - - - -	25 "
Veal suet, - - - - - -	25 "
White resin, - - - - - -	50 "
Yellow wax, - - - - - -	100 "
Sulph. Ether, - - - - - -	100 "
Camphor, - - - - - -	40 "

Pulverize the cantharides without having previously dried them, pass them through a sieve and suspend the pulverization as soon as you have obtained one hundred parts of fine powder; place this powder in a large-mouthed bottle, and add to it the sulphuric ether; put the remainder of the cantharides in a tinned basin with the lard, the suet and a sufficient quantity of water to float the whole; boil gently one hour, continually stirring the mass, then set aside to cool in the same vessel. Now separate the compound which floats on the surface from the matters that have settled at the bottom of the vessel; melt this fatty compound, filter through cloth into a tinned vessel upon a sand bath. Add the resin, the wax and the camphor; heat until all be completely melted; then add the powdered cantharides and ether, and heat until the ether be completely evaporated, that is to say, about an hour. Finally, pour the ointment into a marble mortar and stir until it be completely cold.

This ointment, being rather soft, should be spread thinly upon cerecloth (*sparadrap**) instead of sheep-skin, as is yet customary with some. The vesicating effect of this application is very prompt. It takes place in from two to three hours at most, according to the susceptibility of the skin, the temperature of the part to which it is applied, and the care with which it is kept in contact with the surface.

Although this ointment contains a good portion of camphor, it will be prudent to interpose the oiled paper whenever the action of the cantharides upon the urinary organs is objectionable; or, what will answer as well, the plaster should be left upon the skin not exceeding two hours or two hours and a half, a sufficient quantity of cantharides being absorbed in that time to produce the local without the general effect.—[*Translated from Bul. Gén. de Therap.*]—*South. Jour. Med.*

On Atropine in Painful Affections of the Face.—By W. P. Brookes, Esq., M. D., M. R. C. S. E., Surgeon to the Cheltenham General Hospital.—A few weeks back I was called in to a lady in this town, suffering from a severe cold, accompanied with a most intense and painful affection of the right side of the face, forehead, and around the orbit of the eye. The pain continued after all the symptoms of the cold had left her, and I could not allay it with warm fomentations, or other common remedies. I at last tried the application of an ointment, composed of atropine five grains, lard three drachms, with one drop of atter of rose; a piece the size of a pea to be applied three times a day. The pain was allayed after the second application by day, but at night returned with as much violence as before. The remedy was continued, and after two days all pain had ceased, and has not since returned. The effect of it was so marked, that I am inclined to think it will prove a most useful remedy in painful neuralgic affections.

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* The French "sparadrap" is somewhat similar to our patent adhesive plaster. Oil-silk would answer.—*Trans.*

I must also mention the marked effect it had on the pupils of the eye, in this case, after the second application of it; they were dilated to a great extent (much more than I ever saw from any other preparation of belladonna), and continued so for two or three days after it was discontinued. I have since tried it in the case of a man on whom I operated for cataract in both eyes. The one in the right eye was not perfectly depressed, and rose again, (he had also lippitudo of the eyelids from a burn). Belladonna had but little effect on this eye (although it perfectly dilated the other.) but the ointment of atropine, three grains in two drachms, dilated it effectually. In a case of glaucoma I have now under treatment, belladonna will not increase the size of the pupil in either eye to any great extent, but the ointment does so satisfactorily.—(*Lancet.*)

On the use of Bromine in Hepatic Affections, &c.—By Dr. Robert Dick.—There can be no doubt, that in some cases of hepatic derangement iodine affords relief; and the action of bromine considerably resembles that of iodine. A congestion both of the biliary and of the blood-vessels of the liver occasionally occurs without any obvious cause: the bile is scantily discharged; the volume of the liver is enlarged; and the whole abdomen, probably from a *remora* in the portal circulation, becomes tumid, as in incipient ascites. In these circumstances, an effect seemingly magical follows the use of iodine or bromine. The liver acts and subsides, and the belly rapidly resumes its ordinary size. Magendie's formulæ for the use of bromine are still as good as any, only the doses may be considerably larger than ordered by him. Bromide of potassium, ten grains; orange or cinnamon water, four or six ounces; dose, a dessert-spoonful twice or thrice a day. Or, bromide of iron, thirty-six grains; confection of roses, *q. s.* for fifty pills; two to be taken night and morning.

In dyspeptics with strumous habits, the above formulæ, the latter of them more particularly, will be found very useful. There is a form of dyspepsia which may be said to be characteristic of strumous subjects; it also is found in persons constitutionally prone to bronchitic attacks; and in both these classes of persons, the mucous membrane of the stomach has the same inflammatory dispositions with that of the trachea and bronchiæ. It is remarkable, that so soon as abscesses form in the lungs, or purulent, expectoration begins, the irritability of the stomach disappears, appetite becomes lively and digestion vigorous.—(*Lancet.*)

Hydro-Persulphate of Iron in the Treatment of the Diseases caused by Lead. By M. Sandras. (Bullet. de l'Acad. de Med., March, 1847.)—In cases of poisoning, in general, two indications present themselves, viz.: to evacuate, if possible, the whole or a part of the poisonous substance, and to convert it into an insoluble body. In poisoning by lead, in particular, purgatives fulfil the first indication; the persulphate of iron the second, by transforming beyond the stomach, upon which it has no action, every preparation of lead into an insoluble compound, which is innocent and easy of expulsion.

The following is the method of treatment of these diseases. On the admission of the patient, and often the following days, a bath with soap is ordered to thoroughly cleanse the skin; immediately afterwards, a purgative, an agreeable drink, and a small quantity of opium if the pains are very intense or if there is insomnia, are given. At the same time, a table-spoonful of a mixture of persulphate of iron and syrup of gum arabic is given morning and evening. This treatment is continued until the cure is complete, or until there is no longer the least sign of poisoning; increasing the dose in proportion to the gravity and obstinacy of the symptoms, by which means the patient is kept constantly supplied with the antidote, which causes no inconvenience, as it has been taken during one, two, and three months, and even in the dose of a table-spoonful every hour, without the slightest functional disturbance being created. Under this treatment the amelioration is generally perceptible on the third or fourth day. If, however, the colic, constipation, insomnia, or pains persist, the baths, simple or alkaline, purgatives and opium must be repeated, and in case of vomiting, clysters must be used.

In those cases in which the cramps are very severe, in which there is trembling, with or without delirium, and in those in which epilepsy exists, opium must be exhibited in large doses, 4, 6, or 8 grains in 24 hours, and the dose of the persulphate also increased.

In cases of general and local paralysis M. Sandras administered strychnine internally, and externally in the form of ointment. The strychnine thus employed ought to be continued, commencing by the smallest dose, until the patient experiences slight tetanic attacks, of short duration, and having their seat particularly in the paralyzed parts. Such is the basis of the treatment employed by M. Sandras, to which, he affirms, the most inveterate and rebellious cases ultimately yield. He had treated in two years, from July, 1844, to July, 1846, 123 cases, of which only three terminated fatally, and one of these was from an intercurrent pneumonia. 120 recovered entirely; 25 of this number in less than eight days, 26 in less than fifteen days, 17 in less than three weeks, 26 in less than four weeks, 13 in less than five weeks, and 13 in two or three months.

Physiological Action of the Iodide of Potassium. By MM. Boys de Loury & Costilhes. (Gaz. Med. de Paris.) In an article on the therapeutic action of different medicines used at St. Lazare, in the treatment of Syphilis, these gentlemen remark that they have paid particular attention to the effects produced by this article, and that they occur in the following order:—

1. *Action on the Intestinal Canal.*—The first day, the dose being 0·75 gramme, (about 10 1-2 grs.) slight pain and heaviness in the large cul-de-sac of the stomach; the pain is, however, not always present; the appetite is usually increased; it is remarkable how soon after the taking of the Iodide the desire for food arises.

The following days these symptoms diminish or disappear. The second day, the dose being 1·00 gramme, (upwards of 15 grs.) heaviness of the head, colic, and diarrhœa.

2. *On the Urinary Secretion.*—This is more abundant the first day, that is, the patient passes more than he drinks. This symptom is almost constant. The urine is clear and transparent—the patients urinate more by night than by day; sometimes, however, the urine is not increased. In larger doses, 2 to 3 grammes, the urine is sometimes increased in proportion to the increased dose of Iodide; sometimes it remains normal.

3. *Eruption.*—The most frequent is the pustule of acne, which shows itself from the end of the first to the second day. It most frequently occurs on the face; it does not usually last as long as the treatment, that is, it diminishes or disappears in 15 or 20 days. Ecthyma more rarely. Neither papular erythema nor purpura hemorrhagica were observed; in one case an eczema impetiginodes was seen.

4. *Pruritus* very seldom observed.

5. *Conjunctivitis.*—The conjunctiva was sometimes influenced when the iodide was given in doses of 1 to 2 grms. Both conjunctivas may become inflamed. It principally occurred during the first days of the use of the medicine, and was characterized by general vascularity and chemosis.

6. *Menstruation.*—Although this medicine is spoken of by most authors as an emmenagogue, MM. B. & C. often remarked a decrease in the quantity of the menstrual fluid. Once the discharge re-appeared a week after the menstrual period; but this may have been only a coincidence.

7. *Discharges* from the uterine cavity were not perceptibly increased.

8. As invariable and immediate effects, the authors never once missed seeing the decrease or suspension of the pains of the bones after the first or second day of treatment. No other antisyphilitic agent possesses so prompt and constant an action.

9. *Salivation.*—This is a rare symptom in women, it was only seen once. M. Ricord observed it more frequently, perhaps, because he gave the medicine in larger doses. The saliva remained thin, the mucous membrane of the mouth uninflamed and unaltered; the salivary glands not swollen—a true hypersecretion, without peculiar smell.

10. *Effects on the Circulation*, none.

11. *On the Respiration and Bronchi.*—Notwithstanding the number of cases submitted to the action of this medicine, the authors never observed any peculiar coryza, characterized by considerable increase of thin mucous secretion without any tendency to pass into a purulent state, nor of bronchitis with sputa which continue stationary, without attaining a purulent character.

12. *Accidents produced by the Iodide.*—The authors object to giving the Iodide in as large doses as some physicians administer it. M. Biechy relates two cases in which serious accidents were produced. In the first, the patient being benefitted by doses of $\frac{3}{4}$ of a grain, gradually increased to 15 grains, thought by doubling the dose to double the advantage received. The three first days he suffered from general uneasiness and intense headache; the fourth day he was affected in his lower limbs, his sight disturbed, and his hearing almost gone; on trying to walk, his legs gave way under him, and his arms had lost all power. Finally, having taken a few steps, he fell unconscious; on coming to himself, he remained in a state of languor and weakness, which did not disappear for several days after the suspension of the medicine. In the second case, death ensued; but it was doubtful if it could be attributed to the Iodide.

Bisulphuret of Carbon in Sciatica. By Dr. Berg, Viborg.—A countryman who, for five years, had suffered at times under a very painful sciatica with commencing emaciation of the limb, loss of appetite and sleep, and against which a great variety of remedies had been employed, was at last put under alcohol of sulphur (the bisulphuret of carbon), used both internally and externally, after the method of Wutzer. At the end of five days there was complete removal.—*In "Zeitschrift für die Gesammte Medicin." Observations of Danish Physicians, communicated by Professor Otto.*

Though the alcohol of sulphur or bisulphuret of carbon, has been known for about fifty years, yet it has been seldom put to any medical use. From the Memoir of Lampadius, it appears to have been internally employed with advantage in rheumatism, chronic gout, palsy, and cutaneous eruptions, and externally against burns: the latter use being dependent on its energetic property of producing cold.—*Month. Jour. of Med. Science.*

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Art. XV.—The Pennsylvania System of Prison Discipline—Triumphant in France. Phila. 1847. 8vo. pp. 24. - 226

Art. XVI.—Tracts on Generation. Proofs that the periodical maturation and discharge of Ova are, in the mammalia and human female, independent of coition, as a first condition of their propagation. By T. L. G. Bischoff, D. M., Professor of Physiology at Giessen. Translated from the German. By C. R. Gilman, M. D., Prof. of Obstetrics, etc., College of Physicians and Surgeons, N. York; and T. Kellkampf, M. D., Gebhard Professor, Columbia College, N. York. S. S. & W. Wood, 261 Pearl street, N. York. 1847. 8vo. pp. 65. 231

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Art. XIX.—Principles of Physics and Meteorology. By J. Muller, Prof. of Physic at the University of Freyburg. First Am. Edition. Philadelphia: Lea & Blanchard. 1848. 8vo. pp. 635. - - - - - - *ib.*

Art. XX.—A Defence of Phrenology, containing—I. An Essay on the Nature and Value of Phrenological Evidence; II. A Vindication of Phrenology against the attacks of Dr. J. Aug. Smith; III. A view of facts relied on by phrenologists as proof that the cerebellum is the seat of the reproductive instinct. By A. Boardman. New-York. 1847. 12mo. pp. 222. 235

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Art. XXIII.—The New-Jersey Medical Reporter, and Transactions of the New-Jersey Medical Society. Edited by Joseph Parish, M. D. October, 1847. Burlington. 8vo., pp. 84. 237

Art. XXIV.—Illustrations of Medical Botany, consisting of Colored Figures of the Plants affording the important articles of the Materia Medica, and descriptive Letter-Press. By Joseph Carson, M. D., Prof. of Materia Medica in the Philadelphia College of Pharmacy, etc. The drawings on stone, by J. H. Colen. Philadelphia: R. P. Smith, 144 Chestnut-street. 1847. No. 2. - - - - 238

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We have received the following works since our last:

Lecture Introductory to the Course on the Practice of Medicine in the Jefferson Medical College. Delivered Nov. 2d, 1847. By J. K. Mitchell, M. D., Prof. of the Practice of Medicine, etc., etc. Philadelphia. 8vo. pp. 24. (From the Author.)

An Address on the Bonds of Professional Union. Delivered before the Medical Association of Adams, Brown, and Clermont counties, Ohio. By J. P. Harrison, M. D., etc. Cincinnati. 8vo. pp. 28. (From the Author.)

An Introductory Lecture, delivered to the Class of Institutes of Medicine in Jefferson Medical College, Nov. 4th, 1847. By R. Dunglison, M. D., etc. Phil. 8vo. pp. 24. (From the Author.)

Lecture Introductory to a Course on the Principles and Practice of Surgery, in the Jefferson Med. College. Delivered Nov. 1st, 1847. By T. D. Mutter, M. D., Professor of Surgery, etc. Philadelphia. 1847. 8vo. pp. 26. (From the Author.)

An Essay on Strictures of the Urethra, with an Account of the Mode of Curing Stricture by Cutting. By James Bryan, M. D., etc. Philadelphia. 1847. 8vo., pp. 21. (From the Author.)

An Introductory Lecture on the Relations of Chemistry to the Vital Force. Delivered in the Philadelphia College of Medicine. By D. P. Gardner, M. D., Prof. of Chemistry and Med. Jurisprudence. (Published by the Class.) Philadelphia. 1847. 8vo., pp. 11. (From the Author.)

Lecture Conclusive to a Course on Surgery in the University of Pennsylvania, embracing a short Account of eminent Belgian Surgeons, Physicians, etc. Delivered Dec. 22, 1847. By W. Gibson, M. D., Prof. of Surgery. pp. 32. (From the Author.)

Lectures on Agricultural Chemistry. Delivered before the Senior Class of the University of Georgia. By John Le Conte, M. D., Prof. of Natural Philosophy and Chemistry. Athens. 8vo., pp. 30. (From the Author.)

The American Medical Almanac, for 1848. Containing Statistics of the various Medical Colleges, Hospitals, Dispensaries, etc., of the U. States, etc. Philadelphia: Lindsay & Blackiston. 18mo., pp. 224. (From the Publishers.)

An Address, delivered at the Castleton Medical College, Introductory to the Autumnal Session of 1847. By W. Sweetser, M. D., Prof. of the Theory and Practice of Medicine. (Published by the Class.) Troy. 1847. 8vo., pp. 15. (From the Author.)

Report of the Committee on Charity and Alms House on the Medical Department of the Alms House. New-York. 8vo., pp. 39.

An Introductory Address. Delivered in the Medical College of Ohio, Nov. 2d, 1847. By L. M. Lawson, M. D., Prof. of Materia Medica and Therapeutics, etc. Cincinnati. 8vo., pp. 22. (From the Author.)

Memoir of George McClellan, M.D. A Lecture Introductory to the Course of the Theory and Practice of Physic, in the Medical Department of Pennsylvania College, Session of 1847–8. By W. Darrach, M. D. Philadelphia. 8vo., pp. 40. (From the Author.)

The Practice of Medicine. A Treatise on Special Pathology and Therapeutics. By Robley Dunglison, M. D., Professor of the Institutes of Medicine, etc., in Jefferson Medical College, etc. 3d Edition. In 2 vols. 8vo., pp. 767, 729. (From the Publishers.)

Dublin Dissector, or System of Practical Anatomy. By Robert Harrison, M. D., M. R. I. A., Professor of Anatomy and Surgery in the University of Dublin, etc. 5th Ed. 2 vols. 12mo., pp. 871. (From the Publishers.)

A Defence of Phrenology. Containing—I. An Essay on the Nature and Value of Phrenological Evidence. II. A Vindication of Phrenology against the attacks of Dr. J. Aug. Smith. III. A View of Facts relied on by Phrenologists as proofs that the cerebellum is the seat of the reproductive instinct. By A. Boardman. New-York: E. Kearney. 12mo., pp. 222. (From the Author.)

Account of a new Anæsthetic Agent, as a Substitute for Sulphuric Ether, in Surgery and Midwifery. By J. Y. Simpson, M. D., etc., Professor of Midwifery in the University of Edinburgh, etc. Edinburgh. (From the Author.)

Lecture Introductory to a Course on Surgery, in the University of Pennsylvania. Containing a short account of eminent British Surgeons, Physicians, Scientific and Literary Men. Delivered Oct. 22, 1847. By Wm. Gibson, M. D., Prof. of Surgery. Phila. 1847. 8vo., pp. 32. (From the Author.)

Treatise on Fractures in the Vicinity of Joints, and on certain forms of Accidental and Congenital Dislocations. By Robert Wm. Smith, M. D., etc., Fellow of the Royal College of Surgeons in Ireland. Dublin. 8vo., pp. 314. (From the Author.)

On Poisons in relation to Medical Jurisprudence and Medicine. By Alfred S. Taylor, F. R. S., etc. Edited with Notes and Additions. By R. E. Griffith, M. D., etc. Philadelphia: Lea & Blanchard. 8vo., pp. 687. (From the Publishers.)

Materia Medica and Therapeutics. By Martyn Payne, M. D., Professor of the Institutes of Medicine and Materia Medica in the University of the City of New-York. New-York: S. S. & W. Wood. 1848. 8vo., pp. 411. (From the Author.)

Principles of Physics and Meteorology. By J. Muller, Prof. of Physics at the University of Freyburg. 1st Am. Edition. Revised and Illustrated by 538 engravings on wood and two colored plates. Philadelphia: Lea & Blanchard. 8vo., pp. 635. (From the Publishers.)

Catalogue of the Officers and Students of Dartmouth College, for the year 1847–8. pp. 24. (From Professor Peaslee.)

A Lecture Introductory to the Course of the Theory and Practice of Medicine in the University of New-York. By Samuel Henry Dickson, M. D., Prof. of the Theory and Practice of Medicine. 1848. 8vo., pp. 19. (From the Author.)

Report of the Board of Trustees of the Brooklyn City Hospital, for the year 1847. 8vo., pp. 21. (From Dr. Ayers.)

Anniversary Discourse before the New-York Academy of Medicine. Delivered in the Broadway Tabernacle, Nov. 10th, 1847. By John W. Francis, M. D. (Published by order of the Academy.) New-York. 1847. pp. 112. (From the Author.)

Report of the Standing Committee of the Ohio Senate on Medical Societies and Colleges. Relative to sundry petitions for the passage of a law to regulate the practice of Physic and Surgery. 8vo. pp. 5.

Eleventh Annual Report of the Trustees and Superintendent of the Ohio Institution for the Education of the Blind, for the year 1847. Columbus, Ohio. 8vo., pp. 24.

Annual Report of the Directors and Warden of the Ohio Penitentiary for the year 1847. 8vo., pp. 26.

Allopathy, Hahnemannism, and Rational Homœopathy. Compiled from the German of Dr. Griesselich, etc. By A. C. Becker, M. D. New-York. 8vo., pp. 24. (From the Author.)

Ophthalmic Memoranda respecting those Diseases of the Eye which are frequently met with in practice. By John Foote, M. D., Fellow of the Royal College of Surgeons in London, etc. N. York: S. S. & W. Wood. 1848. 18mo., pp. 131. (From the Publisher.)

The Obstetrical Remembrancer: or Denman's Aphorisms on Natural and Difficult Parturition; the Application and Use of Instruments, etc. Augmented by Michael Ryan, M. D. 1st Am. Edition. With additions of Thomas F. Cock, M. D., Visiting Physician to the N. York Lying-in-Asylum. New-York: S. S. & W. Wood. 1848. 18mo., pp. 264. (From the Publishers.)

A Text-Book of Agriculture. By N. S. Davis, M. D. New-York: S. S. & W. Wood. 1848. 12mo., pp. 187. (From the Publishers.)

A Practical Treatise on the Causes and Symptoms of Spermatorrhœa. By M. Lallemand. Translated and edited by H. J. McDougall, Member of the

Royal College of Surgeons of England, etc. Philadelphia: Lea & Blanchard. 1848. 8vo., pp. 320. (From the Publishers.)

Females and their Diseases. A Series of Letters to his Class. By Chas. D. Meigs, M. D., Professor of Midwifery and Diseases of Women and Children in Jefferson Medical College, etc., etc., Philadelphia: Lea & Blanchard. 1848. pp. 670. (From the Publishers.)

Elements of the Principles and Practice of Midwifery. By David H. Tucker, M. D., Prof. Principles and Practice of Medicine, etc., etc., in the Franklin Med. College, Philadelphia. Philadelphia: Lindsay & Blakiston. 1848. pp. 405. (From the Publishers.)

On the Causes and Treatment of Abortion and Sterility: being the Result of an extended Inquiry into the Physiological and Morbid Conditions of the Uterus, with reference especially to Leucorrhœal Affections and the Diseases of Menstruation. By James Whitehead, F. R. C. S., Surgeon to the Manchester and Salford Lying-in Hospital. Philadelphia: Lea & Blanchard. 1848. pp. 368. (From the Publishers.)

The Human Brain: Its Structure, Physiology, and Diseases, etc. etc. By Samuel Solly, F. R S., etc. Philadelphia: Lea & Blanchard. 1848. pp. 496. (From the Publishers.)

On Disorders of the Cerebral Circulation, etc. etc. By Geo. Burrows, M. D., etc. With colored plates. Philadelphia: Lea & Blanchard. 1848. pp. 216. (From the Publishers.)

Lectures on the Physical Phenomena of Living Beings. By Carlo Matteucci, etc. Philadelphia: Lea & Blanchard. 1848. (From the Publishers.)

Since January we have received the following Journals in Exchange:—

Zeitschrift für die gesammte Medicin. Herausgegeben von F. W. Oppenheim. Hamburg. For Oct., Nov., and Dec.

British Foreign Medico-Chirurgical Review, for January, 1848.

Braithwaite's Retrospect, for January, 1848.

Ranking's Half-Yearly Abstract of the Medical Sciences, for Jan., 1848.

The London Medical Gazette, for January.

——— Lancet, for January and February.

The Provincial Medical Gazette, for January.

The Dublin Medical Gazette, for January.

The London and Edinburgh Monthly Journal of Medical Sciences, for January.

The American Journal of the Medical Sciences, for Jan.

The Medical News and Library, for Jan. and Feb.

The Boston Medical and Surgical Journal, for Jan. and Feb.

The Philadelphia Medical Examiner, for Jan. and Feb.

The Buffalo Medical and Surgical Journal, for Jan. and Feb.

The American Journal of Pharmacy, for Jan.

The New Orleans Medical and Surgical Journal, for Jan.

The Western Journal of Medicine and Surgery, for Jan. and Feb.

The St. Louis Medical and Surgical Journal, for Jan. and Feb.

The Southern Journal of Medicine and Surgery, for Jan. and Feb.

The American Journal and Library of Dental Science, for Jan.

The Western Lancet, for Jan. and Feb.

The Missouri Medical and Surgical Journal, for Jan. and Feb.

The New-York Dental Recorder, for Jan. and Feb.

The Dental Register of the West, No. 2.

The American Journal of Insanity, for Jan.

The Charleston Medical Journal and Review, for Jan.

The New-Jersey Medical Reporter.

The British American Journal of Medical and Physical Science, for Jan. and Feb.

The Annalist, for January and Feb.

☞ The next number of the Journal will be published on the first of May next.

THE NEW-YORK
JOURNAL OF MEDICINE.

FOR MARCH, 1848.

PART FIRST.

Original Communications.

Art. I.—*On Acute Laryngitis.* By John B. Beck, M. D., Professor of Materia Medica and Medical Jurisprudence in the College of Physicians and Surgeons of New York.*

It is only very recently that inflammation of the larynx has become the subject of any special inquiry; and by many, it has been supposed that it was a disease wholly unknown until within a few years past. This supposition is, however, by no means probable. Being a disease of simple inflammation, there can be no doubt that it must have occurred, occasionally at least, from the earliest periods; and a review of their writings will convince us that it did not escape the attention of observing men even in the infancy of medical science. For the purpose of establishing this fact, as well as of facilitating the inquiries of those who may hereafter be tempted to the investigation of this interesting subject, I shall enter upon a few historical details.

Hippocrates appears to allude very distinctly to this disease in his book of Prognostics. He says, "those anginas are very dangerous and speedily fatal, which produce no sensible change in the fauces or in the throat, which cause great pain, and induce orthopnœa. They produce suffocation on the first, second, third, or fourth day."† I am aware that a writer of no common authority, Sir Gilbert Blane, has given it as his opinion that the disease here referred to is more probably the croup, because no mention is made of difficult deglutition.[*] This cannot, however, be justly considered as any solid objection to the supposition of the disease being laryngitis. It should be recollected, that it was not the object of the great father of medicine to give us in his "Prognostics," minute and detailed descriptions of diseases. He presents us with those great and prominent features only, from which a judgment may be formed concerning the general character and the final issue of diseases; and hence it will be found, that in more instances than one, some of the most distinctive symptoms are not at all brought into view. Illustrations of this might be adduced in abundance. It is unnecessary, however, to go beyond the very subject of which we are speaking for one perfectly satisfactory. In the aphorism succeeding the one just quoted, Hippocrates speaks of anginas accompanied with pain, tumor, and redness, and adds, that they are very fatal. Now, it is evident that in these cases deglutition must be very greatly impeded, and yet no mention is made of this circumstance. The omission, therefore, of any notice of difficulty of deglutition, a symptom common to all the anginas, cannot be admitted as of any great weight in determining this question. As to the conjecture that the disease alluded to by Hippocrates is croup, upon the very principle assumed by Sir Gilbert Blane, it is attended with even greater difficulties than the one to which he opposes it, inasmuch as nothing is said concerning cough, a symptom so characteristic of croup as to distinguish it from every other affection.

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* The substance of this Essay was first published in the year 1824, in the New York Medical and Physical Journal, (vol. ii.), of which the author at that time was one of the editors. It was the first general essay that had appeared on the subject of Laryngitis, and it may be curious to state that the disease was not noticed, as far as we know, by any of the works on the practice of medicine then extant. Since then, the attention of the profession has been especially attracted to the subject, and highly-valuable contributions have been made by several individuals. At present there is not a work on general practice, or on diseases of the thorax, in which the disease is not more or less fully treated. How far some of the authors of these works have availed themselves of the views and facts contained in this Essay, (and that without acknowledgment), is left to the judgment of those who may feel disposed to compare them together.—*Ed. N. Y. Journal.*

† The Prognostics and Crises of Hippocrates, translated from the Greek, &c. By H. W. Ducachet, M. D., &c., p. 68.

Cœlius Aurelianus, in treating of the various kinds of cynanche, describes one which, if it does not answer in every respect to our ideas of laryngitis, yet resembles it more closely than any other disease. He represents it as unattended by any evident tumor or inflammation of the fauces, and as destroying life more speedily by strangulation than any of the other forms of this affection.[†]

By Celsus this species of angina is also distinctly recognised, when he says: "Interdum enim neque rubor, neque tumor ullus apparet," &c. And afterwards, in noticing the symptoms which are common to this as well as to the form of angina attended with tumor, he adds: "Illis communia sunt; æger non cibum devorare, non potionem potest, spiritus ejus intercluditur. Levius est, ubi tumor tantummodo et rubor est, cætera non sequuntur."[‡]

Riveinus also, in his Praxis Medica, under the head of Angina, has left us what was no doubt intended as a description of this disease.[§]

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[*] Medico-Chirurgical Transactions of London, vol. vi. p. 143.

[†] At si sine manifesto tumore fuerit passio, sequitur collorum tenuitas, cum extentione, atque subsectione inflexibili. Item vultus et oculorum cavitas; frontis extensio, color plumbens, spirationis difficultas plurima, nullo, nt supra diximus, manifesto tumore, sive inflammatione aliqua apparente, neque in internis, neque in externis partibus, hebe tudo plurima, atque imbecillitas ægrotantis; et celerimus velacatus cum præfectione, mortis effectus." De morbis acutis et chronicis, etc., lib. iii. cap. 2, p. 182. Amstelædami, 1722.

[‡] Anod. Cornel. Celsi de medicina. lib. iv. cap. 4, p. 196. Lugduni Batavorum, 1746.

[§] In speaking of one of the varieties of angina, he says: "Iu cynanche maxima est respirationes læsio, ita ut ægii strangulari videantur, et fancis etiam horis aliquando strangulantur; ac non nisi erecta cervice, et aperto ore spicare valeant

Morgagni, too, in his great work on the "Seats and Causes of Diseases," has furnished us with a history of the symptoms and morbid appearances, on dissection, of an unequivocal case of this disease.*

By Lommius, a writer who flourished in the early part of the last century, a most admirable description has been given of a species of angina, the identity of which with laryngitis can hardly be mistaken.† So, also, Boerhaave seems to have been perfectly familiar with the disease. "If the larynx," says he, "chiefly be acutely inflamed, and the seat of this evil be in the white muscle of the glottis, and together in the fleshy muscles, whose office it is to shut the same; there ariseth a terrible quinsy, which soon strangles. The signs are, a violent pain in the raising of the larynx, upon swallowing, increased upon speaking or hallooing; a very shrill and shrieking voice; a very hasty death, with the utmost anguish; and this is the worst kind of all, and not discernible by any outward signs."‡ In the treatment, he recommends copious and repeated blood-letting, purging, blisters, inhalation of warm vapors, and finally, bronchotomy.

Lieutaud divides anginas into four species: the inflammatory, catarrhal, gangrenous, and spasmodic. The last of these he thus defines: "Convulsive angina varies much from the other species of angina, both in the greater difficulty of breathing, and in swallowing being more impeded, so that even when erect, the patient can scarcely draw breath, while, from accurate examination, there appears no mark of redness, obstruction, or swelling about the parts affected. Such is the violence of this disease, that it takes off some patients in a few hours."§

Mead, also, in his medical precepts, gives an account of this disease as a species of quinsy, which he calls a *strangulation of the fauces.* In this affection, he says, "all the nerves are convulsed, and the patient drops down dead suddenly. Of this sort (of quinsy) I have seen one instance, in which, though a large quantity of blood was drawn twice in six hours' time, yet that evacuation was of no avail. Upon dissection, there was not even the least appearance of swelling or inflammation in the glands or muscles of the mouth and throat; but

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Fauces vehementa dolent, nullus tamen rubor aut tumor, ne que in faucibus intus neque extra in cervice apparet. Lazari Riverii, opera omnia Universa. Praxis Medica, lib. vi. cap. 7, p. 93. Lugduni, 1663.

* Epist. xliv. 3.—Cooke's Morgagni, vi. p. 221, Am. Ed.

† "Porro mortifera est, atque omnium horrendissima angina, citissime, que incidit, et necat, quæ neque in cervice, neque in faucibus quicquam conspicui, vel tumoris, vel ruboris exhibet, simulque summi doloris tormentum, et vehementem febrem, atque tantum non presentem suffocationem infert. Tum profecto oculi vertuntur, et rubent, et veluti iis qui strangulantur, prominent: vox impedita nihil significat, et qualis catulorum est, tenuis editur: os apertum hiat: frigidi æris cupidum, ex eoque spumans saliva movetur: lingua exeritur, crebroque, ut in anhelis propter laboris impetum equis, agitatur; potui datus liquor per nares remeat: labra livescunt: cervices rigidæ contractæque sunt: ipse æger totus inquietus est, crebro e cubili exilit, moleste supra dorsum, commodius recto collo atque capite cubat; videt, auditque obtuse, et præ suffocatione non intelligit quid audiat, quid dicat, aut gerat: tandem vero strangulatu, atque syncope oppressus, perit."—*J. Lommii Observationes,* p. 99. Amstelædami, 1738.

‡ Aphorisms, 802, 809.

§ Synopsis of the Universal Practice of Medicine, &c., p. 465, translated by E. A. Atlee, M. D.

the blood-vessels were turgid everywhere with a thick blood. This disease, however rare," he adds, "is described by Hippocrates."[*]

Although it appears evident from the foregoing review that this disease is very far from being of such recent origin as some have supposed, and also that, under the generic term of angina, it has been described by a number of successive writers, yet it must be admitted, that it is only within a few years that its true nature and distinguishing features have been investigated with that accuracy and precision to which its great importance so justly entitle it. That this was not accomplished, by the ancients more particularly, is to be attributed entirely to the want of those anatomical investigations after death, which in later times have thrown such a flood of light over pathological inquiries.

In 1809, three cases of this disease were reported by Dr. Matthew Baillie to a society in London for the improvement of medical and chirurgical knowledge, and were published in their transactions in 1812. The whole paper is exceedingly interesting, and furnishes a fine specimen of that accuracy of observation and maturity of judgment which so eminently characterized that distinguished physician.[†] It is a fact worthy of remark in connexion with this paper, that Dr. Baillie states, that after a practice of more than twenty years, he had only met with two cases of the disease, and that he knew many physicians, of much longer experience, who had never met with even a single case.

In the same year in which the foregoing paper was published, appeared an account of some cases of this disease in the Medico-Chirurgical Transactions of London,[‡] by Dr. Farre; and to this physician, perhaps, are we most indebted for awakening the attention of medical practitioners to this important subject. Since that time, several valuable contributions of cases and observations have appeared in relation to it, in the succeeding volumes of the Transactions of that Society,[§] as also in the periodical publications of Britain.[‖] A brief notice is also taken of it by Dr. Marshall Hall,[¶] in his treatise on diagnosis; and in the works of Armstrong,[**] Bell,[††] and Bedingfield,[‡‡] will be found many important facts and observations in relation to it.

In France, the disease was briefly but accurately noticed in the Dictionnaire des Sciences Medicales, which appeared in 1812.[§§] In 1819, a memoir was published by M. Bayle; entitled, "Mémoire sur l'œdème de la glotte, ou angine laryngée œdémateuse."[‖‖] This is a valuable production; but it relates entirely to that variety of the disease which is attended with effusion under the mucous membrane of the larynx.

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[*] Medical precepts and cautions, by Richard Mead, M. D., &c., p. 71.

[†] Transactions of a society for the improvement of medical and chirurgical knowledge, vol. 3, p. 275.

[‡] Vol. 3, p. 84.

[§] Medico-Chirurgical Transactions, vol. 3, p. 84, 323; vol. 4, p. 297; vol. 5, p. 156; vol. 6, p. 133, 141, 221.

[‖] Edinburgh Med. and Surg. Journal, vol. 9, p. 199; vol. 10, p. 284; vol. 12, p. 205, 238, 247.

[¶] On Diagnosis, by Marshall Hall, M. D. &c.

[**] Practical Illustrations of Typhus Fever, by John Armstrong, M. D., p. 334, Am. ed.

[††] Surgical Observations, by Charles Bell, part 1, p. 14.

[‡‡] A compendium of medical practice, by James Bedingfield, p. 51, Am. ed.

[§§] Art. Angine.

[‖‖] Nouveau Journal de Medicine, Janvier, 1819.

In this country we are not without our contributions on this interesting subject. So early as the year 1808, in a paper on the cynanche trachealis, by Dr. Dick of Virginia, this disease is distinctly alluded to. He speaks of it as the most inveterate species of the croup; and from its being confined to the larynx, he assigns to it the name of *Cynanche laryngæa.*[*] More recently, important and highly instructive cases of it have been recorded by Drs. Bliss[†] and Peixotto[‡] of New York, and Dr. Jackson[§] of Boston.

Besides the cases and detached remarks just enumerated, I am not aware that anything of importance has been done on this subject. At any rate, no general essay concerning it, as far as my knowledge extends, has yet been attempted. To supply, if possible, this defect in our medical literature, is the object of the present paper; an attempt to which I am the more emboldened, as the frequent occurrence of the disease in this city during the last year, (1823), has afforded me no inconsiderable opportunities of becoming practically acquainted with it.

Character and Symptoms. In its commencement this disease may be looked upon as purely local, and the first symptom by which it is usually ushered in, is a slight sense of soreness in the fauces, resembling what is commonly called a sore throat. As this is considered nothing more than the effect of an ordinary cold, it excites no alarm, and most commonly is slighted by the patient. Frequently no febrile symptoms are present, and he sometimes finds himself well enough to attend to his ordinary business. If the fauces be examined, they will perhaps be found covered with a blush of inflammation, unaccompanied generally by any swelling of the tonsils or neighboring parts. This state of the throat continuing for a day or two, the patient is suddenly seized with a sense of great uneasiness about the region of the larynx. The pain in the part is by no means acute, and the principal source of complaint is a feeling of stricture or obstruction about the passage of the larynx, through which the air passes in respiration. For the purpose of relieving this obstruction, frequent attempts are made to clear the throat by hawking, etc. The voice now becomes affected with greater or less hoarseness, according to the violence of the attack. Connected with this, there is labor in respiration and slight difficulty of deglutition. As the disease advances, sometimes in the course of a few hours, at others in a day or two, all the symptoms increase in force. The respiration becomes more impeded; the voice hoarser and more suppressed; the deglutition more difficult. Occasional fits of suffocation now come on, which sometimes last for several minutes, and occasion the greatest distress. As these subside, the patient becomes easier, without, however, experiencing the least amelioration of the other symptoms. At longer or shorter intervals, the fits of suffocation are repeated, and at each repetition, they become more violent and distressing. Frequently they seize the patient during sleep. The anguish which is exhibited at this stage of the disease, and during the paroxysms of interrupted respiration, can better be imagined than described. The larynx is perceived in violent motion—the head is thrown back, and on the countenance is depicted the extremest agony; the eyes are wild and prominent, the mouth is open as if gasping for breath, the lips are pale, the tongue protrudes, and the voice is scarcely audible. In this situation, patients have not unfrequently attempted to end their sufferings by endeavoring to cut their throats.* It is evident that, under such circumstances, life cannot be protracted very long, and the wretched victim, after a few convulsive efforts, expires from actual suffocation. Such is the general career of this disease, necessarily varying somewhat in individual cases, according to the violence of the assault and the peculiarities of the patient's constitution. In some instances, not the slightest trace of inflammation is to be detected on examining the fauces; and with the exception of the local uneasiness about the larynx, there is nothing which indicates the imminent danger in which the patient is situated.

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[*] Facts and observations relative to the disease of Cynanche Trachealis or Croup, by Dr. Elisha C. Dick of Alexandria; Barton's Medical and Physical Journal, third supplement, p. 242.

[†] Trans. of the Physico-Medical Society of New York, vol. 1, p. 115, N. Y. 1817.

[‡] New York Medical and Physical Journal, vol. 2, p. 436.

[§] The New-England Journal of Medicine and Surgery, vol. 10, p. 22.

I have hitherto said nothing of the symptoms of general febrile or inflammatory excitement as characterizing this disease, because, although in many cases they are very striking, yet in others they are wanting, and in some of the very worst cases they do not make their appearance from the commencement to the termination of the disorder. So striking, indeed, is this latter fact, that by Bayle it is considered as constituting a positive evidence of there being two distinct affections, to which the larynx is subject; the one being a simple œdema of that organ, while the other is the inflammatory affection of the mucous membrane described by Boerhaave and other authors. To myself, however, there does not appear to be any just ground for this distinction. In all the cases recorded by Bayle, and which are precisely similar to those of Baillie, Farre, etc., there can be no question that the disease was primarily and essentially a subacute inflammation of the mucous membrane of the larynx, and the œdema was nothing more than the consequence of this inflammation—being an effusion into the cellular tissue lying underneath it, and connecting it with the surrounding parts.† Looking upon it in this point of view, it is easy to

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* Cases of this kind are related by Bayle.

† This opinion I conceive to be fully established by the post-mortem examinations of cases of what are called *œdema of the glottis.* In almost every instance, more or less inflammation of the mucous membrane of the larynx has been detected. In confirmation of this fact, the reader is referred, among others, to the following cases:

Cases by Dr. Farre, Medico-Chirurgical Transactions of London, vol. 3, p. 84.

Cases by Dr. Bouillaud, recorded in Johnson's Medico-Chirurgical Review, N. S., vol. 3, p. 205.

Cases by Mr. Porter, in his work on the Surgical Pathology of the Larynx and Trachea, p. 111.

I am happy to find this opinion sustained by other authority than my own. Dr. ~~James Johnson~~, in an article in which he notices this very essay, says, "The term *Angina œdematosa* appears to be unnecessary. The œdema clearly constitutes no fundamental character of the disease. It is an effect or consequence of the acute inflammation going on in the parts."—Medico-Chirurgical Review, N. S., vol. 3, (for 1825,) p. 207.

On this point, Andral says, "Œdema of the glottis is nothing more than a considerable infiltration of the cellular tissue situated between the folds of the mucous account for the absence of febrile symptoms, as well as for the fatal nature of these cases. The effusion relieves, to a certain extent, the local inflammation, and thus prevents reaction; at the same time that it mechanically closes the rima glottidis by the distension which it occasions, and thus destroys the patient. If the inflammation of the laryngeal membrane, on the other hand, be greater, general febrile and inflammatory symptoms may come on, and instead of this passive infiltration in the subjacent cellular tissue, it may terminate in the effusion of coagulable lymph on the surface of the membrane, and sometimes in ulceration and destruction of the parts. If this view be correct, it is evident that the only difference in these cases consists in the degree of inflammation, and the consequences of it, resulting from the peculiar structure of the larynx, and not, as Bayle supposes, in any specific difference of disease.

The most usual duration of this disorder is from three to five days. In not a few cases, however, it has proved fatal within the first twenty-four hours, and in some even during the first paroxysm of suffocation.*

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membrane which surrounds the rima of the glottis, and which, from being thus distended and swollen, obstructs the passage of the larynx to a greater or less degree. This œdema rarely occurs as an idiopathic disease: it is most commonly connected with acute inflammation of the mucous membrane of the larynx, though it sometimes occurs during the progress of chronic affections of that organ."—(A Treatise on Pathological Anatomy, by G. Andral, translated by Townsend and West, vol. 2, p. 310. American edition.)

* The following case furnishes a most remarkable instance of the extraordinary rapidity with which this disease sometimes destroys life. It occurred in this city, and I am indebted for the particulars of it to my friend Richard R. Hoffman, M. D., who was the physician in attendance.

"At one P. M. on the 10th April, 1823, a servant called at my office, requesting me to hasten to Mr. M., whom she reported to be choking to death. Taking with me some emetic medicines, a probang, and polypus forceps, which were at hand, I immediately attended. On entering the room, I was struck with the extreme anxiety expressed on the patient's countenance. His neck was denuded, the larynx moving violently up and down, his eyes staring, face flushed, and covered with drops of sweat. His whole frame was agitated, and the difficulty of breathing appeared almost insufferable. He pointed to a glass, containing a mixture of Cayenne pepper and vinegar, and applying his hand to his throat, reiterated in a hurried whisper, 'Can't breathe, can't breathe, Cayenne pepper,' etc. On attempting to swallow a little water which was handed him, it was convulsively ejected from the mouth. I seated him near the window to examine the fauces: they were rather more red and tumid than natural, but presented to the view no other morbid or extraneous impediment to respiration. A vein was opened in each arm, (using his cravats for ligatures,) and bled freely; but death supervened from suffocation, with a rapidity as great as if a strict ligature had been made on the trachea.

"In the short interval, not exceeding ten or fifteen minutes, from the time of my arrival, until the fatal termination of the case, no account of the previous symptoms could be obtained. It was now ascertained that he had complained of soreness of the throat the evening before, as well as at breakfast, but was not prevented from engaging in his mercantile pursuits that morning. Experiencing some difficulty of breathing, however, he returned home earlier than usual for dinner, and erroneously believing his complaint arose from the palate being down, resorted to the mixture of Cayenne pepper for relief, a few moments before I was called in.

"On the following morning, the parts concerned in the disease, as well as the pharynx, fleshy palate and tongue, were detached for examination. The mucous membrane of the fauces appeared slightly inflamed, while that of the rima glottidis especially, was so distended by a visible congestion of the blood-vessels, together with an effusion of serum in the subjacent cellular texture, as effectually to conceal and shut up the passage to the windpipe. This inflamed and œdematous condition of the mu-

By Bayle, instances are related in which it was protracted during the space of several weeks, and then terminated fatally. Such instances, however, are rare.

It may be considered as one of the striking peculiarities of laryngitis, that its attacks are confined to persons who have reached adult life. Such has, at least, been the case in almost every instance which has as yet been recorded. In some it has been at the advanced age of sixty, and even upwards. Most usually, however, it occurs in the prime of life, between the years of puberty and forty-five or fifty. In a very few instances, it has been observed in children. By Dr. Marshall Hall, cases of this kind are recorded.* But in these, it should be recollected that the disease was induced by the accidental application of a powerfully stimulating cause to the parts themselves, in which, of course, predisposition could have had no agency at all. With regard to other cases that have been adduced of its occurring in infancy and childhood, they are in many respects so unsatisfactory as scarcely to justify us in considering them as genuine instances of this disease.

Although not confined exclusively to either sex, yet males appear to be much more liable to inflammation of the larynx than females. This is a curious fact, confirmed by the histories of the cases which have been recorded. Whether this be purely accidental, or whether it be owing to the greater exposure of males to the causes producing the disease, it is not easy to say.

From the frequency of inflammatory affections, and especially those of the throat in the autumn and winter, it might naturally be supposed that this disorder would be more likely to occur in those seasons, than in any other portion of the year; and this has been verified by the result of observation. It may, however, take place at any period of the year, if the patient be exposed to sudden transitions of temperature, or to an atmosphere loaded with moisture.

In many, perhaps in a majority of cases, it has been remarked that the patients had been previously subject to catarrh, quinsy, etc. From the vicinity of the organs affected in these complaints, it can readily be conceived how inflammation of them would predispose the larynx to be similarly affected.

Appearances on dissection. On opening the body of a person who has died of laryngitis, the tonsils and the velum pendulum palati will be found perhaps slightly inflamed. In some instances, the posterior and upper portion of the tongue is also somewhat inflamed. The epiglottis most generally exhibits the evidences of high inflammation, and is much thickened: it frequently stands erect, so as to leave the cavity of the larynx almost entirely uncovered. In the larynx, various morbid appearances present themselves, depending upon the violence and

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cous membrane was apparent throughout the larynx, and traces of inflammation extended down the trachea, as far as its bifurcation, where our researches terminated.

"The subject was in the prime of life, of a strong constitution, sanguine temperament, and of a plethoric habit of body.

"It was a source of satisfaction to the numerous relatives of the deceased, that two gentlemen of the highest eminence in the profession arrived almost simultaneously with myself."

* Four cases of children who had attempted, by mistake, to drink boiling water from the spout of a tea-kettle. By Marshall Hall, M. D., etc. (Medico-Chirurgical Transactions, vol. 12, p. 1.)

duration of the previous disease. In some instances no other evidences of disease are observable, besides a simple redness and thickening of the mucous membrane of the larynx. This thickening is frequently so great as nearly to obliterate the cavity of the glottis.

In other cases, together with the inflamed condition of the mucous membrane of the larynx, there is found an effusion of serum in the cellular tissue underneath it, so great as completely to close the rima glottidis. This constitutes that form of the disease which is known by the name of *œdema of the glottis.*

In other cases, again, the inflammation of the membrane of the larynx terminates in effusion of lymph upon its external surface, by which the passage of the glottis is either completely closed, or very much diminished in size.

Occasionally purulent matter has been detected on the larynx; and in one case, an extensive abscess was found between the mucous membrane and the muscles of the larynx.* Generally, the trachea is unaffected. In some cases, however, slight traces of previous inflammation are discovered. It is not followed by effusion; and in no instance, I believe, has anything like the croupy membrane been formed.

The lungs are also more or less affected. In two of the cases recorded by Dr. Baillie, "the lungs did not collapse upon taking off the sternum." In one of Dr. Farre's cases, the lungs were slightly congested; and in the other, "there was some accumulation of mucus in the cells of the lungs, and a slight effusion of serum into their reticular structure; the left pleura partially adhered, and the cavities contained rather more fluid than is natural to them." By Bayle, it is stated that the lungs were found gorged with blood. By the same writer, the blood is asserted to be darker colored, and more difficult to coagulate than healthy blood. These appearances are very justly ascribed to the deficiency of oxygen with which the lungs are supplied, and the consequent superabundance of carbon in the blood; and it is to the interruption in the process of respiration, that death in this disease is to be ascribed. What confirms this opinion, is the fact that the condition of the lungs resembles in every respect that of those who die in consequence of suspended respiration from other causes.

Causes. Among the causes capable of producing this disease, may be mentioned, sudden variations of temperature; diseases of some of the neighboring organs; the application of a powerful stimulus to the part itself.

Sudden variations of temperature. As of all other inflammatory disorders, this is unquestionably the most common cause of laryngitis. Most of the cases on record have arisen from imprudent exposure of the body. A humid atmosphere would also seem to be more particularly favorable to the development of the disease. This was strikingly confirmed in this city in 1823, when it may almost be said to have prevailed epidemically.

Diseases of the neighboring organs. From the contiguity of the tonsils, pharynx, etc., to the larynx, it is easy to see how affections of the former may involve the latter. There is every reason to believe, that even ordinary inflammation of the tonsils sometimes proves suddenly fatal by the diseased action extending to the larynx. That this is particularly the case in the malignant form of the disease, (Cynanche maligna,) will scarcely admit of a question. In those cases of this latter disease which sometimes occur, in which the patient dies suddenly and unexpectedly, this occurrence may generally be traced to the extension of diseased action to the larynx.

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* See History and Dissection of a fatal case of Cynanche laryngæa, by Edward Percival, M. D. (Medico-Chirurgical Transactions of London, vol. 4, p. 304.)

That disease of the pharynx may produce a subsequent affection of the larynx, is established by several cases on record. Mr. Bedingfield relates the case of a woman aged thirty, who, during convalescence from pneumonia, was attacked with difficulty of deglutition and respiration, hoarseness and suppression of voice, cough, etc. On examining the fauces, no appearance of disease could be detected. After remaining in this condition for twelve weeks, the patient died; and on dissection, the larynx was found inflamed, and the membrane so much thickened as to diminish very considerably the rima glottidis. On continuing the dissection, it was discovered that the cause of this mischief in the larynx was a tumor, in shape and size resembling a filbert, situated at the anterior pharynx, just below the rima glottidis.* By its pressure, it had produced ulceration in the pharynx, as well as the morbid appearance just described in the larynx.

Mr. Charles Bell gives the history of a case of diseased pharynx, which, after about a month's continuance, spread to the larynx; and towards the close of the disease, this seemed to be the part mainly affected. After a protracted sickness of nearly three months, the patient, a woman about thirty-five years old, died; and on dissection, the pharynx and beginning of the œsophagus were found studded with scirrhous tumors, so as nearly to close the passage. "Where the mucous membrane was reflected over the glottis into the trachea, it was found much thickened, white, and dense; and on looking through the larynx from below, two white tumors were seen projecting from the sides of the tube. These left a triangular opening so small, that it was wonderful this poor woman could breathe so long."†

The application of a powerful stimulus to the part. The stimulus to which I allude is boiling water or steam. In the Medico-Chirurgical Transactions of London are related several interesting cases of children who, by mistake, attempted to drink boiling water from the spout of a tea-kettle. From the report of the writer, it appears that the effects were not, as might have been expected, inflammation of the œsophagus and stomach, but inflammation of the glottis and larynx.‡ In the New York Hospital, as I am informed by the former house-surgeon, Dr. F. G. King, cases of a similar character have occurred in several persons who were scalded on board one of our steam-boats, from the bursting of the boiler of the vessel. The inhalation of the hot steam produced all the symptoms of acute laryngitis.

Diagnosis. As laryngitis destroys life with great rapidity, the physician has frequently but a very short period allowed him in which to put forth the resources of his art for the rescue of his patient. To enable

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[*] A Compendium of Medical Practice, by James Bedingfield, p. 51

[†] Surgical Observations, Part I., by Charles Bell, p. 53.

[‡] By Marshall Hall, M. D. etc., vol. 12, p. 1.

him to use the most prompt and efficacious means for this purpose, it is necessary that it should be clearly distinguished from those of the neighboring organs, with which it may be confounded.

Tonsillitis. In this disease both the respiration and deglutition are sometimes seriously affected, but as these are occasioned entirely by the inflammation and enlargement of the tonsils, it may readily be distinguished by an inspection of the fauces. In laryngitis, no tumor or swelling of the tonsils is observed, and the difficulty of respiration is not merely greater, but arises from a cause entirely different.

Pharyngitis. The freedom of the respiration in this complaint, while the difficulty of swallowing is exceeding great, sufficiently distinguishes it from laryngitis.

Trachitis. This is the disease most liable to be confounded with laryngitis, and which it is of the most importance correctly to distinguish, inasmuch as upon it may depend our decision in relation to one of the most essential means of relief, viz : the operation of laryngotomy. Although these two diseases have several symptoms in common, yet I believe an attentive observer will experience little difficulty in recognising the existence of either, if the symptoms are tolerably well marked. Those which distinguish laryngitis, are the soreness of the throat, and the blush of inflammation observed in the fauces, in the onset of the disease—the early and great suppression of the voice—difficulty of deglutition—and the seat of distress being the region of the larynx. In all of these respects it differs very strikingly from croup, in which there is no previous affection of the fauces—no loss of voice—no difficulty of deglutition. In croup, moreover, the disease extends down through the trachea into the lungs, and there is always present that peculiar ringing cough, which is at once recognised by those who have ever heard it.*

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* The disease of which General Washington died, although denominated croup by many, I am inclined to consider as laryngitis. The following is the account given of it by the attending physicians, Drs. Craik and Dick.

"Sometime in the night of Friday the 13th instant, having been exposed to the rain on the preceding day, General Washington was attacked with an inflammatory affection of the upper part of the windpipe, called in technical language, *cynanche trachealis.* The disease commenced with a violent ague, accompanied with some pain in the upper and fore part of the throat, a sense of stricture in the same part, a cough, and a difficult rather than painful deglutition, which were soon succeeded by fever and a quick and laborious respiration. The necessity of blood-letting suggesting itself to the general, he procured a bleeder in the neighborhood, who took from his arm, in the night, twelve or fourteen ounces of blood. He would not by any means be prevailed upon by the family to send for the attending physician, till the following morning, who arrived at Mount Vernon at about eleven o'clock on Saturday. Discovering the case to be highly alarming, and foreseeing the fatal tendency of the disease, two consulting physicians were immediately sent for, who arrived, one at half after three, the other at four o'clock in the afternoon. In the interim were employed two copious bleedings, a blister was applied to the part affected, two moderate doses of calomel were given, and an injection was administered, which operated on the lower intestines: but all without any perceptible advantage ; the respiration becoming still more difficult and distressing. Upon the arrival of the first of the consulting physicians, it was agreed, as there was yet no signs of accumulation in the bronchial vessels of the lungs, to try the result of another bleeding, when about thirty-two ounces of blood were drawn, without the smallest apparent alleviation of the disease. Vapors of vinegar and water were frequently inhaled, ten grains of calomel were given, succeeded by repeated doses of emetic tartar, amounting, in all, to five or six grains, with no other effect than a copious discharge from the bowels.

Aneurism. Aneurisms in the neighborhood of the larynx, occasionally give rise to all the symptoms of laryngitis. Bayle relates the particulars of a case in which these symptoms were occasioned by an aneurism of the aorta pressing upon the trachea. On dissection, the larynx was ascertained to be perfectly healthy.* Mr. Lawrence furnishes us with an instance in which similar effects were produced by an aneurism of the arteria innominata.†

Mr. Wood says, "I know an instance where this mistake led to the performance of tracheotomy, which was attended with the bursting of the aneurism into the trachea; and from a preparation which I lately saw in the College of Surgeons, it appears probable that the same unexpected event must have annoyed another practitioner. In this preparation there is an artificial opening in the larynx; just above the bifurcation of the trachea, another opening is seen to communicate with the cavity of the ruptured sac of an aneurism."‡

Dr. Hope states that tracheotomy has several times been performed with the view of obviating suffocation produced by aneurism of the aorta. More striking facts need not be stated, to show the importance of a correct diagnosis in these cases.§

An abscess in the neighborhood of the larynx. This has been known to produce the symptoms of laryngitis. A case is mentioned in the Edinburgh Medical and Surgical Journal, in which the sac of an abscess was found attached to the under surface of the muscles covering the thyroid cartilage, being reflected over that cartilage, and bounding nearly the extent of the os hyoides. It contained about half an ounce of pus. It produced all the symptoms of inflammation of the larynx, and the patient died of it. The trachea and larynx, on dissection, did not discover any unusual vascularity; they contained only some common mucus; the sacculi laryngis were filled with pus.‖

Treatment. As this disease consists in an inflammation of the larynx, terminating in effusions, which so far close the rima glottidis

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The powers of life seemed now manifestly yielding to the force of the disorder. Blisters were applied to the extremities, together with a cataplasm of bran and vinegar to the throat. Speaking, which was painful from the beginning, now became almost impracticable; respiration grew more and more contracted and imperfect, till half past eleven o'clock on Saturday night, when, retaining the full possession of his intellect, he expired without a struggle.

"He was fully impressed at the beginning of his complaint, as well as through every succeeding stage of it, that its conclusion would be mortal, submitting to the several exertions made for his recovery rather as a duty than from any expectations of their efficacy. He considered the operations of death upon his system as coeval with the disease; and several hours before his decease, after repeated efforts to be understood, succeeded in expressing a desire that he might be permitted to die without interruption.

"During the short period of his illness, he economized his time in the arrangement of such few concerns as required his attention, with the utmost serenity, and anticipated his approaching dissolution with every demonstration of that equanimity for which his whole life had been so uniformly and singularly conspicuous." (New York Medical Repository, vol. 3, p. 311.)

* Nouveau Journal de Médecine, Janvier, 1819, p. 51.

† Medico-Chirurgical Transactions, vol. 6, p. 227.

‡ Medico-Chirurgical Transactions of London, vol. 17, p. 175.

§ On this point I must refer to the valuable work of Dr. J. Hope, "on the diseases of the Heart and Great Vessels."

‖ Edinburgh Medical and Surgical Journal, vol. 16, p. 156.

as to interrupt regular and healthy respiration, our indications of cure seem to be simple and clear. They are, in the first place, to arrest if possible, the progress of inflammation, and thus prevent effusion; and, if we should fail in this object, in the second place, by means of an artificial opening in the trachea, to enable the patient to breathe until the obstructions in the larynx may be removed, either by the process of absorption, or by the aid of medicine. Our means for accomplishing the first of these objects are bloodletting, emetics, cathartics, blisters, and mercury. The second requires the operation of tracheotomy.

Although the general principles of treating this disease appear to be thus obvious, yet the little success which has hitherto attended the management of it, even in the hands of the most distinguished professional men, is a sufficient apology for entering upon this part of our subject somewhat more in detail.

Bloodletting. Although almost every writer who has treated of this subject has assigned the first place to bloodletting, and although there are few practitioners who, when called to a case, would not immediately have recourse to this powerful agent; yet it must be conceded, that it does not appear, as the result of impartial experience, that this remedy, even when very liberally employed, has been attended with that decided advantage which might naturally have been expected. Dr. Armstrong informs us, that out of six cases, there was only one in which venesection was conspicuously serviceable; and in almost all the fatal cases that are recorded, it will be found that this remedy has been pretty freely used. Conceding all this, it does not justify the unfavorable inference which has been drawn by some against the use of bloodletting. Like every other agent in medicine, bloodletting differs entirely in its effects, according to the extent to which it is carried, as well as according to the stage of the disorder in which it is used. And I am inclined to believe, as well from theory as from experience, that in many instances of this disease, where the use of venesection has not been attended with any beneficial consequences, it may be attributed either to its not having been carried to a sufficient extent in the first instance, or to its having been used at that stage of the disorder when organic changes had already taken place, and when, of course, instead of doing any good, it must be productive of positive injury. In speaking of the extent to which bloodletting ought to be pushed, I do not refer at all to the *absolute quantity* of blood which may be drawn, but entirely to the *effect* produced upon the system. This effect is syncope; and in all cases where the condition of the patient does not absolutely contra-indicate the measure, to bring about this should be the object of the practitioner. The insidious nature of the first periods of this disease, and the rapid progress which it makes to effusion, ought to convince the medical attendant that nothing short of the boldest treatment can rescue his patient from destruction. By ordinary bloodletting it is scarcely possible to reach the seat of disease, remote and circumscribed as it is in the larynx. Even supposing, however, that such a bleeding could reach it, its only effect would be to *moderate* the action in the part. That it could not *arrest* its progress must be evident, when it is recollected how very slight a degree of inflammation in the larynx will produce all the dreadful consequences attendant upon this affection.

The very same reasons which induce me to consider that the ordinary abstraction of blood can be attended with no great benefit in this disease, convince me of the high and unequivocal advantages which result from carrying it ad deliquium. When this effect is produced, the most distant as well as the minutest parts of the system come within the sphere of its influence; it not merely moderates, but it suspends and alters existing actions, at the same time that it relaxes spasm, a symptom which, in a greater or less degree, always accompanies inflammation of the larynx.

In those unfortunate cases where effusion has already taken place under the mucous membrane of the larynx, constituting the œdematous condition of these parts, it is evident that bleeding, however practised, can be of but little service; yet even here, as it is impossible to know positively that such effusion has actually occurred, it may be considered in every respect as the safest practice, and certainly the one promising the greatest chance of relief, to have recourse to a single bleeding, which shall be felt at once throughout the system, rather than to repeated bleedings, the only effect of which must be to weaken and finally exhaust the strength of the patient.

There is another consideration, too, in connection with this point, of considerable importance. If it shall be found, after bleeding ad deliquium, that the symptoms are not mitigated, it may with great probability be inferred that such effusion has already taken place, and that other means of relief must accordingly be resorted to. The value of any test by which to judge of the actual state of the parts, and of the progress which the disease has made, can only be appreciated by those to whose lot it has fallen to witness the march of this terrific disorder. No such inference can be drawn from the effect of bleeding, which is not carried to the extent already proposed. As the object here ought to be, to induce syncope with the least sacrifice of the patient's strength, it is proper to suggest that he should be bled while standing, and from a large orifice. As auxiliaries to general depletion, the local abstraction of blood from the throat by leeches, may be used with advantage, especially where it is not considered advisable to carry general bleeding to any further extent.

Emetics. Next to bloodletting, emetics are the remedies best calculated to afford prompt and decided relief; and they do so, not merely by the relaxing effects which they have upon the whole system, but by the copious secretions which they produce from the mouth and fauces. By most writers they do not seem, however, to have been treated with anything like the importance justly due to them. In most of the individual cases of the disease which have been published, especially those in Great Britain, emetics are not to be found among the articles which were resorted to. Dr. Armstrong is the only modern writer who insists upon their use in a manner at all proportioned to their value; and he states that he was induced to try them in the commencement of the disorder, from the want of success which had previously attended him in several cases, where he had relied upon copious bloodletting. His practice consisted in giving tartarized antimony combined with ipecacuanha, in repeated doses, until free and frequent vomiting took place. "No circumstance," he adds, "in my professional life ever gratified me more, than the great and sudden relief which the vomiting afforded; in reality it removed all the urgent symptoms at the time, and being excited as soon as even the slightest signs of stricture returned, at last completed the recovery."* Subsequent experience seems to have convinced this very accomplished physician, that in cases where the inflammation runs high, it is not perfectly safe to rely upon emetics alone, to the exclusion of the ordinary means for subduing inflammatory action. That cases may sometimes occur, in which emetics, unaided by other remedies, may be fully adequate to the removal of the disease, is no doubt true; but as a general rule, the best plan is to premise a copious bleeding, which besides the effect it produces upon the disease itself, is the most efficacious means of preparing the system for the prompt and salutary operation of emetics, an object certainly of very great consequence, and one which perhaps is not sufficiently regarded in practice.

Purgatives. Besides unloading the intestinal canal of whatever offensive matter may be present, purgatives may prove beneficial, by lowering the general action of the system, and by creating a new centre of irritation, and thereby diverting the flow of blood from the parts laboring under disease. It is in this latter way chiefly that purgatives prove of use in laryngitis. Too much dependence, however, should not be placed upon them, inasmuch as they can at best exercise but a remote influence over the disease, while, from the slowness of their operation, much valuable time may be lost in securing the safety of the patient by other and more efficacious means.

Blisters. It has become so much a matter of course to apply blisters in all cases of local inflammation, that to call in question the propriety or efficacy of the practice, may appear to savor of skepticism, in relation to remedies sanctioned by time and experience. Nevertheless, it is very questionable whether, in the disease under consideration, blisters have proved of that unequivocal utility which, by some, has been attributed to them. In many of the cases which have terminated fatally, they have been used, and in some to a very unexampled extent. Notwithstanding this, the application of blisters appears to have been attended, in some cases, with decided benefit. By Sir Gilbert Blane, great importance is attached to them; and in recommending them, he insists particularly upon their being of a large size.† As auxiliaries, they may unquestionably prove advantageous, and it is important therefore to determine at what stage of the disease they are most proper, and where they should be applied. From the rapidity with which the disease runs its course, it is perfectly obvious that if they are to do any good at all, they must be applied very early. The best practice therefore is to apply them immediately after venesection. With regard to the part to which they should be applied, if the effects of a blister be, as they undoubtedly are, to excite local irritation, and, as a consequence of this, to produce a current of fluids to the blistered part, then it would seem to be self-evident, that they should never be placed too near the original seat of disease, as their effect must necessarily be that of increasing the afflux of the fluids upon organs already laboring and oppressed from this very cause. In the case of laryngitis, from the vicinity of the diseased organ to the surface over it, it appears plain that the application of a blister to the throat must increase the determination of blood to the larynx; and if this is the fact, the practice is very clearly improper. Independently of this consideration, the application of a blister to the throat may be rendered objectionable by its interfering with the use of leeches should they be deemed necessary. The situations most appropriate, perhaps, for this remedy, are the chest, and back of the neck; and that some substantial good may be derived from them, they should be of a *large size*, and kept running during the disease.

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* Practical Illustrations of typhus fever, etc. by John Armstrong, M. D., etc., p. 336. American edition.

† Medico-Chirurgical Transactions of London, vol. 6, p. 146.

Calomel. After the use of depletion and emetics, there is no article which can be trusted to with such just confidence as calomel. To be effectual in this disease, however, it must not be used with a timid hand. From the great rapidity with which the disease frequently runs its career, it is evident, that unless introduced with such decision as to bring the system speedily under its influence, mercury can be of no service. It should be commenced with, therefore, early in the disease, and should be unwaveringly persisted in, until this object is accomplished. There is nothing which can supply its place, and scarcely any symptom which can contra-indicate its use. With regard to the extent to which mercury should be carried, I would insist in an especial manner upon the necessity of producing free ptyalism in every case where it can be effected. Independently of its being the only certain criterion by which to judge that the system is under its influence, the greatest advantages are to be expected from the copious secretions which are thus produced from the glands of the mouth and throat. At any rate, whether it be explained upon this principle or not, it is only when carried to this extent, that calomel has proved successful. In many cases in which this remedy has been used, without, however, occasioning salivation, the disease has nevertheless terminated fatally. Yet I have not met with a single one which did not end favorably in which the mouth became affected.

Tracheotomy. When all our efforts at subduing the inflammation in the larynx have failed, and we find the obstructions to respiration constantly increasing, the only resource left is, to make an artificial opening into the windpipe. That this may be done without the least hazard, has been proved by multiplied experiments,* and the success which has already attended its employment in laryngitis, should encourage us to a repetition of it in all cases where other means have proved ineffectual. There are two circumstances more particularly deserving of attention in relation to this operation, and on which its success may be said principally to depend. *The first is, that it should not be delayed until the last stages of the disease,* when the patient is already sinking under the prostrating effects of long-impeded respiration. To perform the operation under these circumstances, may indeed display the dexterity of the surgeon, but it can be of no benefit to the suffering patient. Whoever has attentively read the histories of the cases which are upon record, cannot but have been forcibly struck with the truth of this remark. Dr. Baillie suggested, that if no substantial benefit was gained from medicine in thirty hours, the operation of bronchotomy might be resorted to. It is evident, however, that no general rule can be laid down or observed on this subject. In some cases it may be delayed much longer, while in others, to wait this length of time would be attended with the loss of the patient's life. Everything, of course, must be decided by the existing emergencies of the case. *The other circumstance to which I allude, is the size of the opening made into the trachea.* In the ordinary way in which the operation is performed, the orifice speedily closes, or if kept open by a canula, the presence of this foreign body inevitably produces great irritation in the parts, and thus jeopardizes its ultimate success. To obviate these effects, Mr. Carmichael, in a recent case of laryngitis, made a large opening into the trachea, by cutting away portions of the rings. The complete success which attended the case, together with the just reasoning of that distinguished surgeon in relation to it, is sufficient to establish it as a great improvement in the mode of performing this operation.*

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* For an elaborate detail of facts on this point, see an interesting paper by WILLIAM LAWRENCE, Esq., in the Medico-Chirurg. Transactions of London, vol. 6, p. 221.

See also a valuable paper on Bronchotomy as connected with inflammation of the larynx, by John Wood, of St. Bartholomew's Hospital, in the Medico-Chirurgical Transactions, vol. 17, p. 138.

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* I cannot do better than quote the interesting account of this operation as furnished by Mr. Carmichael.

"Having ascertained the lower edge of the thyroid gland, an incision, about an inch and a half in length, was made through the integuments from this point to within a finger's breadth of the sternum. The incision was continued between the sterno-hyoidei and the sterno-thyroidei muscles, until the rings of the trachea were fairly exposed. This momentous part of the operation was performed in a few seconds: for with the aid of my assistants, who separated the lips of the wound by means of retractors, I was enabled to see the parts which it was necessary to divide; and by the forefinger of the left hand I successively felt each part previous to the application of the knife, the edge of which, after the division of the skin, was directed constantly upwards during the subsequent parts of the operation; and these precautions were a sufficient security against wounding the arteria innominata, which sometimes rises above the sternum, or from dividing any known or anomalous arterial branch of magnitude which might course in front of the trachea.

"This was all happily accomplished, with very little delay, and the loss of a very few drops of blood, notwithstanding the difficulty which the perpetual motion of the trachea opposes in a person incessantly gasping for breath: two, or perhaps three, of the rings of the trachea, were then divided from below upwards, and this opening was immediately widened by means of a large pair of sharp-pointed scissors, such as I employ for the operation of hare-lip. With these I had provided myself, knowing from previous operations the difficulty of removing by the knife a slip of the rings of the trachea, as recommended by Mr. Lawrence. Some little address is necessary in performing this part of the operation. The sharp point of one blade was introduced at the lowest part of the opening in the trachea, and directed outward so far as to admit, on the closing of the blades, of the division of an extent of the tracheal rings, equal to one half of the opening already made in them; the flap thus made was laid hold of by a pair of dissecting forceps; the point of the scissors was again introduced into the trachea, where the last incision terminated, and carried inwards towards the central opening. Similar incisions in the same manner were made on the opposite side, and a diamond-shaped opening, capable of admitting the point of the little finger with ease, was left in the trachea.

"The patient coughed up a large quantity of thick viscid phlegm through the opening, and seemed so much relieved, that the appearance of suffocation and excessive anxiety which her countenance displayed previous to the operation, immediately disappeared. I am satisfied, that if the operation had been confined in this, as well as in other instances which have occurred to me, to a mere division of the rings of the trachea, that no beneficial result could have followed the measure; and that even the introduction of a tube, which is objectionable on two accounts, would not be attended with any advantage; for, first, a tube excites intolerable irritation, with vio-

ART. II.—*Remarks on Typhus or Ship Fever, as observed at Bellevue Hospital, N. Y., in the Spring and Summer of* 1847. By LYMAN H. STONE, M. D., late Assistant Physician of Bellevue Hospital, Member of the New-York Pathological Society, etc., etc.

To the EDITOR of the NEW-YORK JOURNAL OF MEDICINE.—*Sir,*—In compliance with your request, I herewith send you a hastily-prepared sketch of Typhus Fever, as I observed it the past spring and summer at Bellevue Hospital. The history of this disease, as it occurred during the latter part of summer, has been pretty fully investigated; and as it presented a somewhat different aspect and complications in the early part of the season, I shall confine myself more particularly to the disease as it occurred in the spring months. In connection with the symptoms of this fever, I shall notice a few points only. And one symptom, which I do not remember to have seen noticed by any writer, is a distressing feeling of constriction within the chest, and preceding the formal onset of the disease. In my own case, I experienced this three times, at intervals of a few minutes, during the evening preceding my attack. Three patients have described to me the same sensation. It resembles very closely a transient paroxysm of Angina Pectoris, lasting from one to five minutes. Of these four cases, in three it preceded, and in one followed the initiatory chill. With regard to chills, they were usually the first thing noticed, except in some few cases, in which the approach was very gradual and insidious; but this mode of attack was very infrequent. In sporadic cases of Typhus or Typhoid fever—which I consider one and the same disease—I believe it the more common mode. I have no means of giving the proportion of cases in which chills occurred; but from notes of about one hundred cases, treated between the first of April and the twentieth of May, I make the following record, in connection with other symptoms. Of sixty-six cases, who were either attacked in the Hospital, or were admitted sufficiently early to note the whole course of the disease, the *lenticular eruption* was observed in fifty-eight. By the lenticular eruption I mean the small, lenticular-shaped, yellow or red spots, usually the latter color. They are slight elevations, which disappear momentarily on pressure, and are characteristic of this disease; being scattered over the chest and abdomen, sometimes extending to the extremities, and too often confounded with and called petechiæ. They usually occur on the eighth day, though I have occasionally noticed them as early as the fourth and fifth days, and such cases have invariably been mild and convalescence early. In the only two fatal cases which I have seen in which this eruption was abundant, no addominal lesion was found. In one, no anatomical lesion whatever, and in the other, inflammation of the right lung. These both occurred in April.

In the above 66 cases, petechiæ were noticed in five and sudamina

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lent fits of coughing; and, secondly, the apertures in it cannot be sufficiently large to permit the expulsion of the viscid phlegm which accumulates in most of those cases where tracheotomy is necessary." (Transactions of the College of Physicians of Ireland, vol. 4, p. 312.)

in three instances. In two cases, petechiæ occurred alone ; and in one, all three eruptions were present at the same time.

In one case, the sudamina appeared in the form of bullæ, covering the chest and abdomen, and varying from the size of a pin's head to that of a shilling piece. Later in the season, the petechial eruption was of much more frequent occurrence, but still *not* generally present.

In 64 cases, epistaxis was present in 23, usually slight. In two instances, in which it was free, the arterial action was great, with severe pain in the head and suffusion of the eyes. These symptoms were evidently relieved by the hemorrhage ; these cases occurred early in the spring, and the patients were *not* recent immigrants.

In 64 cases, diarrhœa occurred in 51. This was rarely troublesome at that season, but during the summer months it was frequently a troublesome symptom.

Nausea was a frequent accompaniment, and vomiting was noticed in ten instances ; though, later in the season, it was of more frequent occurrence.

Of these 100 cases, erysipelas supervened in ten instances, in two of which abscesses formed.

Inflammation of the parotids also occurred in eight cases, four of which went on to suppuration, and in one instance laid the bone of the lower-jaw bare for a space of two inches at the angle.

The few cases in which I noticed the slow, irregular, labored respiration, attended with a puffing out of the cheeks at each expiration, invariably proved fatal.

Gurgling could be detected on pressure over the ilio-cœcal valve in almost every case.

Retention of urine was not uncommon.

The delirium, usually low and muttering, sometimes became wild and furious. One patient dashed through the window and fell from the third story upon a stone pavement, without receiving any injury, and speedily recovered.

The pulse presented many varieties. In some, it was frequent and feeble from the first ; in some, it had considerable force and fulness, especially in the early stage. Late in the disease, the grave cases presented two varieties : one, in which it was rather slow, with some degree of fulness ; the other, more common, extremely frequent, feeble and flying. These two, I take it, indicated the two modes in which death took place. The first, accompanying those cases in which death took place by coma ; and the latter, those in which it commenced at the heart, or death by asthenia, and in connection with another symptom afforded valuable indications in the treatment. The symptom referred to in the last sentence is, a *loss of the first sound of the heart.* This I noticed several times, and it usually occurred about the twelfth or fourteenth day. This may result from extremely feeble action of the heart, caused by defective innervation, or from a softening of that organ. For I have observed it in cases in which a post-mortem examination revealed softening, and in those in which it did not.

The tongue, in different cases and stages of the fever, presented almost every variety, which do not require mention. Subsultus tendinum frequently occurred, and I have not found it a symptom of such bad omen as it is usually considered.

The actual number of cases treated, and the mortality, cannot be accurately ascertained, as very little reliance can be placed upon the books of the Hospital, for at one time the number of patients was found to be one hundred and ninety less, upon actual count, than were indicated by the books—the records having been kept by patients too much given to drink. By a table which I prepared, May 12th, for another purpose,* I found the number, on personal inspection of the wards, to be "Two hundred and forty-five, a very large proportion of whom were convalescents."

This number gradually increased to probably about *five hundred* on the first of June, and then gradually decreased, so that not more than *seventy-five* cases remained on the 10th of August, including convalescents. And at this time the two large "fever-wards," which, on the first of June, contained *one hundred and sixty* patients, now contained only thirty-one. Of the patients who came under my care, about 12 per cent. died—not including about 25 who were upwards of forty years of age, of whom 28 per cent. died.

. The disease is fatal, *ceteris paribus*, in proportion to the age of the patient. The following table of 100 patients, whose ages I have preserved, presents about the proportion at the different ages up to forty years; after that, the number is much too large.

Between the	ages of	10	and	15—3,	of whom	0	died.
"	"	15	"	20–11,	"	0	"
"	"	20	"	25–18,	"	2	"
"	"	25	"	30–19,	"	2	"
"	"	30	"	35—8,	"	1	"
"	"	35	"	40—3,	"	1	"
"	"	40	"	45—4,	"	1	"
"	"	45	"	50—5,	"	2	"
"	"	50	"	55—1,	"	0	"
"	"	55	"	60—3,	"	1	"
"	"	60	"	65—3,	"	1	"
"	"	65	"	70—2,	"	1	"
	Total,			80		12	

By this table it will be seen that 37, or nearly half of the whole number, were between the ages of 20 and 30 years. But the number above 40 years is much too large, and if it be reduced to the proper ratio, fully one half will be found included between the ages of 20 and 30. And this proportion, I think, will be found nearly correct.

In four instances, only, I think, I have seen the disease occur twice in the same person, and I attended a person during two attacks, who had suffered one previously, or at least the physician who attended him informed me that his sickness was Typhus fever, and he was well acquainted with this disease.

The subject of the contagiousness or non-contagiousness of Typhus fever, is one of much importance. The causes of disease are, in most instances, so obscure and inappreciable, that it is only by a large collation of facts that inferences worthy of confidence can be deduced; and upon our knowledge of the causes of disease, in a great measure, depends prophylaxis. I have observed some facts which strongly support the doctrine of contagion. My own belief of the mode of its communication is this:—That it is necessary that the atmosphere surrounding the sick person should be inhaled, for a longer or shorter time. The poison is thus received into the blood, through the lungs, and is conveyed through the system, producing its deleterious effects in an especial manner upon the brain, and hence results the early and extreme prostration. I have known in one instance an attack follow the inhalation of an infected atmosphere for the space of five hours, but this is not common. Analogy, which proves nothing, but still affords strong confirmation, is in favor of its contagiousness. Like the indisputably contagious fevers, it rarely occurs twice in the same person; like them, it has its period of incubation, which is not determined, and is doubtless irregular; like them, it is attended with a characteristic eruption, which is pretty uniform in its presence and its period of occurrence; like them, it runs a certain course with considerable regularity; like them, too, it *cannot be cut short*, or in other words, cured. But it differs from the other contagious fevers in this, that none of the latter are attended with a heterologous deposit. True, Peyer's glands have been found enlarged in scarlatina, but I believe never ulcerated, and I am not aware that any deposit analagous to the typhus matter has been found in those cases. But Typhus fever cannot be classed with the other diseases attended with heterologous formations, for the former is acute and contagious, and the latter are chronic and non-contagious; in the former, the deposit is a late and not even necessary occurrence, in the latter it is primary and essentially *the disease.* But by considering the *condition of system* in the latter as the disease, and the deposit as the *result*, the analogy in part remains, except that in Typhus fever the processes are much more rapid. But the proper location of Typhus fever is doubtless intermediate between the contagious exanthems and the non-contagious diseases attended with a heterologous formation. Its contagiousness and eruption have not the same certainty and regularity as in smallpox, nor its deposit the uniformity and importance of tubercle. But, like the latter, it has its favorite locations. These are the glands, aggregate and solitary, of the small intestines, and especially of the lower portion of the ileum. But I am not prepared to say that it does not occur elsewhere, and indeed I am inclined to think that certain small, deep, circular ulcers, surrounded by apparently healthy tissue, which I have found in various parts of the alimentary mucous membrane, were caused by a deposit of typhus matter in the mucous glands, which had gone through the usual process of softening and discharge. But the ordinary softening and ulceration of the mucous membrane of the stomach, which occurs in this disease, I am inclined to attribute to defective innervation. During a second attack of "Ship-fever," which I suffered this summer, in which I am confident ulceration of Peyer's plates occurred, I noticed several small, rounded elevations in my mouth, which soon became small, deep, circular ulcers, which quickly healed.

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* Annalist, May 15th, 1847.

But I will briefly relate a few of the many cases which have convinced me that Typhus fever is contagious—by this term I simply mean *communicable* from one person to another. About the first of February last I took charge of the female "fever-ward" at Bellevue Hospital. This is a large room fifty feet square, with an arched ceiling, I suppose twenty feet high; having three doors, and windows in three sides, besides scuttles in the roof.

The ward was kept scrupulously clean, well ventilated, and at that time contained twenty patients, of whom twelve or fifteen were sick of Typhus fever. At that time three women, who had entered the ward as nurses, lay sick of Typhus fever of a severe form, all having been attacked within a fortnight after entering the ward. Just previous to my taking charge of this ward, a woman who had been in it with syphilis, was discharged cured. On the day after she left the hospital she was attacked with fever, and was brought in ten days afterwards, very delirious, with subsultus tendinum and retention of urine. Knowing that she had been habituated to the use of opium, I gave her morphine in grain doses with marked benefit. About this time the nurse of this ward left the hospital, and her place was supplied by an assistant-nurse from another ward. This person was selected for the reason that she had had a very severe attack of typhus fever in the hospital a year previous. About a fortnight afterwards she was again attacked with the same disease, and died the seventh day. After having charge of this ward for twelve days, I left it and took wards in another part of the hospital. Two days after this change I was attacked with a grave form of Typhus fever. About the middle of April, after my recovery, two very long wards, about twenty feet wide, which had formerly been appropriated to ulcers, were thoroughly cleansed and whitewashed, for the reception of fever cases. These wards have large windows on either side the whole length, and are the best ventilated and most airy wards in the hospital, being in the second and third stories of a long, narrow, separate building. In one of these wards at the time of this change, was a man with ulceration of the cartilages of the knee-joint, and, fearing the pain that moving would subject him to, he requested and was allowed to remain. Twenty-four hours after the fever cases began to come in, he became alarmed and requested to be removed to another part of the building in which there was no fever. It was accordingly done, yet one week afterwards he was attacked with and died of Typhus fever. Another man, who had a scrofulous abscess, was allowed to remain as nurse—he also was attacked and died. Another nurse in the same ward, who had been a long time in the hospital and suffered from Typhus fever *twice* previously, was again attacked. In the other ward I placed as nurse a man whose lip had been removed for cancer; the disease had returned, but his general health was still good. Ten days afterward he was attacked and died. I might mention many more similar cases, besides those which occurred among the penitentiary women, who were employed daily in cleaning the wards, but slept in a separate building at some distance from the hospital. Some of these were removed to the penitentiary hospital, and many cases of the fever subsequently occurred there. I was in charge of this hospital at the time, and, although nearly one half of the patients were affected with syphilis, I have not known one of these patients to be attacked with the fever. And I have known many such patients to remain with impunity in the fever wards at Bellevue. But I am not prepared to think that there is any antagonism between the two diseases. A clerk in the office where the patients sat while their names were entered on the books, suffered from the disease; also two boys who distributed medicines to the wards.

But two physicians, of those *who had much to do with the treatment* of this disease at Bellevue, escaped it. Of those two, one had suffered from the disease while an assistant physician at Bellevue two years previous. The other was *an exception to the general rule.* Two of the assistant physicians were attacked while on duty at the new alms-house on Blackwell's Island, where the air was pure, the wards not crowded, and but few cases of the fever. The first physician who lost his life in the service of this *very generous and grateful city,* at Bellevue, the past season, had suffered severely from Typhus fever about a year previous. The other officers escaped for the reason that they *did not expose themselves,* except the matron.

During nearly a year that I was an assistant physician at Bellevue hospital, I never saw a case of Typhus fever originate in a ward in which there was not already one or more cases. Several cases broke out in the "adjacent alms-house building," it is true, but many immigrants came direct from on board ship, and were allowed to remain in the alms-house building, instead of being sent to the hospital. So much for its contagiousness. With regard to the morbid appearances observed after death from this disease, they presented marked differences during the spring and summer months. In the autopsies of twenty-four persons, mostly males, who died of typhus fever between the middle of April and the middle of May, I found the following lesions, viz.:

Marked softening of the heart in	5
Inflammation of the lungs or pleuræ, or both, in	4
Engorgement or softening, or both, of the liver, in	6
Enlargement or softening, or both, of the spleen, in	16
Ulceration of Peyer's glands in	6
Ulceration of the mucous membrane of the stomach in	3
Perforation of the intestine, and consequent peritonitis, in	1

The same thing (perforation) I found once previous and once subsequent to the time included in the above record. The lungs were found much congested and the heart slightly softened in several instances not noted above.

In the few instances in which I examined the brain of those who had presented the most marked cerebral symptoms, no lesion was found except a slight effusion of serum into the ventricles, and an injection of the vessels of the pia mater. Later in the season, inflammation of the brain and its membranes frequently occurred, as did also effusions into its ventricles and substance. At that time my health was such as not to permit me to continue my post-mortem observations. The first case which I saw in which inflammation of the brain occurred, was in July, and the symptoms struck me as something which I had not before seen. The symptoms commenced soon after the patient began to convalesce, with obstinate constipation and vomiting, which continued two days, when coma, spasmodic twitchings of muscles, strabismus, and dilatation of the pupils came on, followed by death.

In July, I saw one case in which dry gangrene occurred in the foot in a young person.

In two cases in which dysentery supervened during convalescence, extensive ulceration of the mucous membrane of the large intestines was found, also some recently-healed, and some still open ulcers of Peyer's glands. The open ulcers were farthest from the cœcum—thus confirming the opinion that those nearest the large intestine, are the first to ulcerate and the first to heal. And in this connexion I may state, that I have always found the disease most extensive and farther advanced in this part of the tube. In both of these cases the mucous membrane of the rectum was extensively destroyed by ulceration. Higher up the intestine the ulcers became less frequent, and at last disappeared. The upper ones were small, deep, circular, and surrounded by apparently-healthy tissue.

May not the mucous glands of this portion of the intestines have been the seat of a deposit similar to what occurred in Peyer's plates, and this ulceration occurred from its softening? I have seen in autopsies of some cases of dysentery, which occurred on board emigrant ships, in which fever also prevailed, in addition to extensive ulceration, many small elevations, which were evidently mucous glands distended with altered mucous or other fluid. Among these were scattered small ulcers like those mentioned above. Did these cases take the place of fever? They certainly very much resembled Typhus fever, with the addition of the dysenteric symptoms.

The mesenteric glands were enlarged and sometimes inflamed when Peyer's were affected.

Rarely extensive lesions of the abdominal and thoracic organs occurred in the same case.

I never saw the blood, after death, healthy in appearance and well coagulated.

With respect to the *treatment* of this disease, I would willingly leave that subject to others whose views would be authority for those whose opportunities for observing this fever had been limited. Any person of ordinary powers of observation, and possessing the *necessary industry*, can note and record symptoms and morbid appearances; but the treatment of diseases requires a more matured judgment. But having for months lived in the midst of, and faithfully and earnestly studied this disease in all its phases, I wish to enter my protest most decidedly and emphatically against the *mischievous activity* of treatment, by some recommended and pursued in it. The notion that because a man has a fever he must be bled, vomited and purged, and these measures, one or all, repeated again and again as long as the disease continues, is not so thoroughly exploded and obsolete as many in the profession think. That some cases of Typhus fever require such means, is true; and it is also true that many cases which do not require them, will recover under their use, as the active and exclusive modes of treatment pursued by some of the French physicians prove—nay, more, cases have recovered, to my certain knowledge, under the treatment of some *American practitioners*, which was certainly very active but not exclusive, as nearly all the active measures were put in most vigorous operation. But the number of cases occurring among immigrants the past season, which would tolerate such treatment, was very few. Still, unceasing vigilance on the part of the physician is indispensable in this disease. To watch and guide the case, to combat untoward symptoms and dangerous complications, and conduct it to a safe termination, afford "full scope and ample verge" for the display of the most profound sagacity.

I will briefly sketch the mode in which I treated some of the different cases and complications. General blood-letting and active purgation I never resorted to, although we were duly impressed, by those in authority, with the practicability of "*breaking up*" the fever in the first stage by the use of the lancet, tartar emetic, calomel, jalap and gamboge. I have never seen the disease so broken up, but I think I have seen the patient's *powers of endurance* effectually *broken up* by these means. Most of the cases came within two general classes; the first including those who were admitted early, the young and those possessing considerable vigor of system; the second, those who were admitted late in the disease, the old, the half-famished and debilitated. In a very few cases of the first class, in which the arterial action was high, with violent throbbing pain in the head and suffusion of the eyes, the application of cups to the temples afforded relief. In a few instances in which there was reason to suspect a loaded state of the stomach, an emetic of ipecacuanha was ordered. If the bowels were confined, a mild cathartic was administered; in some cases a small dose of calomel, followed by castor oil, but the latter I usually gave alone, and in a majority of cases one or two drachms was quite sufficient. But in most cases enemata were sufficient and preferable, as I think the torpor confined mostly to the large intestines, from the fact that I have almost always found the small intestines empty after death. During the febrile excitement, refrigerants and diaphoretics were given, as the effervescing draught or spirit of mindererus—usually the latter, from the convenience of administering it. But if I were compelled to choose in the treatment of this first class of patients, between all these means on the one side, and ice and cold water on the other, I would much prefer the latter.

Let the patient's head be shaved or his hair cut close; and if it is hot and painful, apply bladders filled with pounded ice; let the entire surface of the body be often sponged with cold water; let the patient chew bits of ice and swallow small draughts of iced water. These are not only very agreeable to the patient, but are powerfully remedial. The excessive heat and thirst are assuaged; the delirium, restlessness and nausea are also allayed in most cases. The comfort and safety of the patient is ensured, without drawing upon the already heavily-taxed vital powers. During this time the patient was confined to bland, nutricious drinks, as toast-water, barley-water, etc. If free, warm perspiration occurred, the pulse continuing good, I felt little alarm for the safety of the patient, *provided* I could control his inclination to gorge himself with food during convalescence, a thing not always easy, especially when friends were allowed to visit them. A relapse in the severe cases, brought on by over-eating during convalescence, generally terminated fatally. In the second class, where the vital powers were feeble and failing, prompt and continued support and stimulation by the use of strong animal broths, beef-tea, wine-whey, brandy and ammonia, afforded the only hope of success.

As a stimulus I prefer, in most cases, brandy and ammonia. Under the free use of these I have seen absolutely hopeless cases recover. In some instances, patients admitted into the hospital in a state bordering on dissolution, cold, livid, and covered in spots with a clammy sweat, pulse imperceptible at the wrist, and so insensible that the point of the finger placed upon the eyeball would not excite muscular contractions, have revived under the administration of two or three grains of carbonate of ammonia and half an ounce of brandy, properly diluted, every ten, fifteen or thirty minutes. Even in these cases liquids will generally find their way into the stomach if put into the mouth, and after one or two doses, if the medicine is going to be of any benefit, the patient will swallow without much difficulty.

The best indications for the use of these remedies are a frequent, feeble and flying pulse, coldness of the extremities, breaking out of a clammy sweat, and a loss of the first sound of the heart. With proper caution their use may be commenced in the case of old and extremely debilitated patients very early. If at any time they cause increase of fever, restlessness and delirium, their use must be suspended. *Good* wines in the form of wine-whey are preferable in some instances.

When inflammation of the lungs or pleura occurred, I treated them chiefly by cupping, and poultices composed of variable proportions of flaxseed meal and mustard. Inflammation of the parotids, by leeching and warm fomentations or poultices. Erysipelas, by warm poultices and especially yeast poultices. I never applied but one blister to a patient sick of typhus fever, and that was to the shaven scalp of one lying comatose. I have seen so *little good* and so *much harm* follow their use, that I will not employ them, except in rare cases.

Of the *ten* cases before mentioned in which erysipelas occurred, *seven* recovered; and of the *eight* in which inflammation of the parotids occurred, *two* died.

Of the necessity of proper ventilation it is unnecessary to speak. But in seeking for ventilation, undue exposure should be avoided. The employment of tents at Bellevue the past season, sufficiently attested the necessity of this caution. A large number of tents were pitched about the first of June, which were small, and contained one or two patients each. No one will doubt that sufficient ventilation was obtained, but the condition of the patients was worse, I fear, than in the crowded wards. Convalescents principally were treated in the tents, and I now have before me a list of twenty-eight which I selected from one ward containing sixty-five, and sent into them when first erected. Going thus from the more equable temperature of the wards to the tents, the extreme heat of which by day, produced by the direct rays of the sun, and the cold and dampness of the nights, tended to light up inflammations, especially of the pulmonary organs, which materially increased the danger. To be convinced of this fact, one had only to stand on the steps of the hospital on a damp evening, and listen to the *coughing* which could be heard from the tents.

Nor will patients bear with impunity the same exposure during convalescence that they would during the height of the fever.

Having thus hastily sketched a few facts in connection with this fever, I close with a few conclusions which I have formed from studying it here and in New England.

1st. That Typhus and Typhoid fevers, so called, are identical.

2d. That this fever may occur in any degree of severity, but, extremes excepted, its course is pretty uniform.

3d. That no one symptom or lesion is necessarily present.

4th. That it is decidedly contagious.

5th. That it rarely, though sometimes, occurs a second time in the same person; and when it does occur a second time, the attack is of shorter duration than the first.

6th. That the access of the disease is much more sudden and well-defined when caused by contagion than in sporadic cases.

7th. That the lesion of Peyer's glands is not essential, and that death may take place from this fever, and leave no apparent lesion of the solids.

8th. That in fatal cases, ulceration of Peyer's glands *cannot* be diagnosticated, but that in cases which recover, it may be suspected from the following symptoms: slow and prolonged convalescence; pain in the abdomen, and diarrhœa after eating, especially if the food is not of the blandest kind; lack of restoration of the appetite; tongue coated and taste vitiated; ulcerations as before described occurring in the mouth. I well remember the cases of two young men, who arrived in the same ship, were both attacked about the same time and lay side by side in one of my wards, and died with an interval of twenty hours between their deaths. Each had diarrhœa, tympanitis, and complained about equally of pain on pressure of the abdomen. On examination, one was found to have extensive ulceration of Peyer's glands, and the other not a trace. In the former the lenticular eruption was slight, in the latter abundant.

9th. That profuse lenticular eruption seems in a measure to alternate with abdominal lesions—simple congestion excepted.

10th. That this alternation is not observed with regard to petechiæ.

11th. That the fluids, and especially the blood, are never found in a normal condition.

12th. That the disease, as it has occurred the past season, presented much more of an *inflammatory character* in the spring than in the summer months.

13th. That this disease cannot be cut short, or in other words, cured; and that in the present state of our knowledge, the expectant and rational plan of treatment affords much the best chance of conducting it to a safe termination.

ART. III.—*Cases in Surgical Practice.* By R. L. HOWARD, M. D., Professor of Surgery in the Willoughby Medical College of Columbus, Ohio.

CASE 1. *Immobility of the Lower Jaw.*—M. B. S., aged 9 years, on the 13th of May, 1846, was brought from Sunbury, Delaware co., O., for the purpose of consulting me respecting an immobility of his lower jaw. The history of the case is briefly as follows:—Six years ago, when the boy was but three years old, he was attacked with some disease for which the physician thought proper to administer calomel, which, it is said, he continued to exhibit for fourteen days in succession. The consequence was, a most violent ptyalism supervened, together with inflammation and sloughing of the inner portions of the cheeks, and exfoliation of the alveolary processes of many of the molar teeth. During the process of cicatrization, strong inelastic bands formed on both sides, but much the most extensive on the left. These bands were attached to the jaws above and below, and bound them firmly together. The integuments on neither side had ever been attacked by gangrene.

As the boy, though quite spare and delicate, seemed perfectly healthy, I resolved to overcome this apparent anchylosis by an operation. Accordingly, with the assistance of Prof. Judkins of Cincinnati, and Prof. Butterfield of Willoughby, I proceeded at once to the undertaking. Being seated in a common chair, with his head thrown back and held by an assistant, Dr. Judkins insinuated a thin pine wedge between his incisor teeth, for the purpose of putting the parts upon the stretch and separating the jaws, while I divided the connecting bands. I at first introduced my bistoury along the lower jaw, and with a few sawing motions separated the whole adventitious substance from it. Turning the instrument upward, I divided the parts in the same manner from the upper jaw, both of which were now separated to the distance of half an inch. I now seized the apparently ligamentous cicatrix, which was attached alone to the inner surface of the cheek, and dissected it out entire.—Turning my finger upon the right side, I found a band of less extent and firmness, which I freely divided by one or two incisions. I was not yet able to separate the jaws as widely as I desired. Passing my finger backward again on the left side, I found the anterior margin of the masseter muscle offered very firm resistance. I divided it from the jaw, as far as seemed to be necessary, when we were able to bring it down as far as we desired.

I now introduced a pine block something over an inch in thickness, between the edges of the incisor teeth, and placed the little fellow in bed.

May 20th. The case has done well. The block has been kept between the teeth three-fourths of the time, and I have no doubt, if the parts are kept upon the stretch most of the time until they are perfectly healed, the operation will be entirely successful.

If the case proves successful, I shall attribute the success to two things: 1st, the entire removal of the cicatrix; and, 2d, to the permanent separation of the jaws until the parts were healed. Very many operations for the removal of this difficulty have, within my observation, proved unsuccessful; and I apprehend that they terminated thus unfortunately, from a neglect of the very procedures which I consider of so much importance.

CASE 2. *Tumor of the Orbit.*—Mrs. Rebecca Pope, aged 40 years—of light complexion, spare habit, and the mother of several children.

This lady was brought from Fairfield co., O., to Columbus, about one year ago, at the time when the Ohio State Medical Convention was in session, for the purpose of consulting some of its members concerning a large and nodulated tumor which completely filled the orbit of the left eye. The history of the case is nearly as follows:—At the early age of twelve years, she noticed the sight of the left eye began to fail, and continued to do so until she was seventeen, when the sight was entirely lost, and the eye itself so prominent that her physicians supposed it to be a dropsical enlargement, for which they punctured the globe. Nothing escaped of consequence, but a violent inflammation supervened, which occasioned a collapse and atrophy of the organ. For about twenty years she experienced no particular inconvenience from it; but about two years previous to her visit to Columbus, she began to feel some uneasiness and pain, together with a decided increase of morbid growth in the socket. The symptoms became so alarming, that she now resolved to seek relief.

At that time she was visited and examined by Drs. Mussey and Judkins, of Cincinnati, and several of the older members of the Convention, who were unanimously of the opinion that the tumor was *probably* malignant, and that the only chance of relief would be found in an immediate extirpation.

The tumor itself completely filled the orbit, and projected considerably beyond the brow and malar prominence. It seemed firmly fixed in its position, and quite immovable.—Upon its anterior surface was imbedded the globe, flattened and diminished to one-eighth its natural size. The palpebræ were widely separated, and unable to cover the tumor.

In consultation, I agreed with all the other medical gentlemen, that the entire morbid growth should be removed with the knife, and advised her to submit to an operation which would afford a fair, or, at least, the *only* prospect of cure, to which she with but little delay consented.

With the assistance of my friends Drs. Schenck, Smith, Denig, and Taylor, and in the presence of several medical students, I proceeded, on the 24th of May, 1845, to extirpate the eye and tumor. The patient was placed in an easy chair, with her head thrown back, and held by an assistant. The external commissure of the lids was divided backwards; the bistoury was then passed between the tumor and the walls of the orbit, nearly to the bottom of the socket, and carried carefully around it until it arrived at the place of entrance. A little dissection with the point of the instrument removed the entire contents of the orbit. The hæmorrhage was not profuse, and the patient bore her suffering with remarkable fortitude. The cavity was lightly filled with lint, suitable dressings applied, and the patient laid in bed. As the pain in the part was severe, one-third of a grain of morphine was administered, which soon afforded relief, when she expressed herself as exceedingly gratified that she had submitted to the operation.

May 25th, morning.—Rested but little during the night.—Nausea and vomiting, pain in the head and general distress had all supervened to an alarming degree. Appropriate remedies were prescribed to allay the irritation of the stomach, and divert the tendency to cerebral disease, but to little purpose. During the afternoon she exhibited symptoms of approaching delirium, and in the evening her mind was decidedly wandering. Prescribed twenty grs. calomel, in divided doses, sinapisms to the extremities, cold water to the head, and blister to the nape of the neck.

26th.—Calomel had operated freely—mind more calm and collected, but not perfectly rational. A general distress and restlessness pervaded the whole system. No arterial excitement or general re-action had yet taken place. Pulse varied from 90 to 120. During the day, symptoms of cerebral disturbance and organic disease increased. In the evening, at my request, my friends Drs. Parsons and Smith saw her with me, in consultation. Similar measures were continued, with the addition of ammonia, and other diffusible stimulants.

27th.—She had no rest during the night; pulse diminished in force and frequency; mind more incoherent and comatose; secretions all scanty and vitiated. Wound examined, and found livid and flabby, and exhibiting no signs of reparation.

These symptoms and others, indicating approaching dissolution, increased, in spite of all treatment, until the 29th, the sixth day after the operation, when the patient died, apparently from inflammation of the brain. To my extreme regret, a post-mortem examination could not be obtained.

On examination of the morbid growth, the disease was found to consist of a tumor the size of a small orange, which commenced in the centre of the optic nerve, between its exit from the foramen opticum, and its entrance into the globe of the eye.

As the tumor increased in size, the neuralema and nervous filaments yielded, and became so expanded over the whole periphery of the tumor, as to form a complete tunic. On dividing this covering, the morbid structure was easily separated from it. Its color was nearly that of chocolate, and of the consistence of liver. Its organization was very imperfect, being easily broken down with the finger, and permeated in many parts by irregular sinuosities. Whether or not the idea is correct, it is impossible to determine, but I was impressed with the suggestion that this abnormal growth might have arisen from the organization of a small quantity of blood, which might have been extravasated in the substance of the nerve, occasioned by an early rupture of the *arteria centralis retina.*

This case is interesting in many respects; but particularly that the patient, after a complete and speedy removal of a tumor of the orbit, apparently in no way connected with the brain, should die so suddenly from inflammation of that organ. A post-mortem examination would probably have revealed the fact that organic disease had already committed fatal ravages within the cranium.

CASE 3. *Urinary Calculus in the Female.*—On the 18th of January, 1845, I was requested to visit a lady who was said to be afflicted with *gravel.* I did so; and on introducing the sound, I immediately detected a large stone in the bladder. For about five years, she had been suffering from all that train of distressing symptoms which characterize this affection. For the last few months they were particularly aggravated. Her form had become emaciated, her skin sallow and dry, digestive organs greatly disordered, appetite variable, pulse 100 to 110, small and irritable, and almost constant desire to void urine.

As the only alternative, I proposed the removal of the stone by an operation, to which she readily consented; when she was put upon a course of diet and medical treatment best calculated to prepare the system for that event.

The question now arose, and one of no little moment, which of the operations hitherto practised in these cases, shall be adopted in this. I found a greater diversity of opinion among surgeons on the subject of lithotomy in the female, than the same operation in the male, but all agree that incontinence of urine is extremely liable to result from a division of the urethra and neck of the bladder in the female, while the high operation, and the one between the urethra and the symphysis pubis, no less endangered the life of the patient from extravasation of urine into the cellular membrane. Sir Astley Cooper, than whom there is not a higher authority in surgery, holds the following language:—

"In all the cases of this operation which I have *performed* or *witnessed*, the urine has not been afterward retained; but I would not deny but the patient might recover the retentive power. As the loss of retention is a greater evil than I can describe, producing excoriation and a very offensive state, I shall, in any future operation of lithotomy, try what may be effected by employing a suture to bring the divided parts together."

This is a sad experience, and is directly calculated to cool the ardor of the most skilful operator, under similar circumstances.

Mr. Cooper's method was, to cut the urethra downward and outward, between the vagina and ramus of the pubis; and his example is followed by Professor Gibson, of Philadelphia. Mr. Druitt divides the urethra directly upwards. Liston cuts upward and outward on each side. Pancoast recommends the high operation, or the one above the pubis. Others divide the urethra downward, into the vagina; and others still open the bladder between the urethra and pubis, and still another class propose to open the bladder between its neck and the uterus. In fact, there is hardly an accessible point in the female bladder that has not been penetrated by the knife of the lithotomist; and yet all these varied operations are liable to indescribable evils—either incontinence, fistula, or extravasation of urine. Dr. Baker, of the State of New York, (*vide Ranking's Abstract, Part* II., *Vol.* 1, *p.* 194,) reports a successful case wherein he commenced the division of the urethra, half an inch behind the meatus, and from thence cut downward and outward. He removed ten calculi, averaging the size of a nutmeg. This method certainly seems to possess some advantages, and I should be strongly inclined to adopt it.

In the case before me, I endeavored to dilate the urethra by sponge tents and bougies, but its irritability was so great that I was obliged to abandon my attempt—each effort being accompanied with excruciating pain. Feeling quite unwilling to make an incision sufficiently extensive to allow of the passage of so large a stone, I was exceedingly anxious to adopt some means whereby I could combine dilatation and incision in the most advantageous manner. For this purpose I contrived a *urethral dilator*, carved from wood, placed it in the hands of J. Fenton, of Columbus, an instrument maker of very considerable skill, who executed my design in steel in such a manner as to answer my purpose perfectly. The instrument consists of two arms of about three-and-a-half inches in length, each semi-cylindrical, and gradually tapering from the shoulder to the point. These arms were so exactly similar, that when their flat surfaces were closely approximated, they form a cylindrical instrument, the size of the largest sound. At the larger extremity is attached a shoulder, which is turned to one side at an angle of 45 deg., and in which is fixed a long thumb-screw, and a sliding pin, so arranged that the arms can be separated or approximated at pleasure, by turning the screw.

Everything being in readiness, with the assistance of my friends Drs. Awl and Smith, I proceeded to the operation.—The patient being placed as in the lateral operation for the male, without any difficulty, I introduced my dilator, and readily separated the arms of the instrument by means of the thumb-screw, so that in fifteen minutes I was enabled, with very little pain to the patient, to place my finger upon the stone, while the instrument still remained in the urethra. As it was not safe to depend upon dilatation farther, I introduced the bistoury and divided the urethra upward and outward, after Liston's plan. This division increased the facility of dilatation to almost any extent. I could now feel the stone in every direction. I immediately introduced a medium-sized forceps, but found the stone too large to escape with impunity to my patient. I again introduced the dilator, distended the parts, and then made another incision outward and up ward on the opposite side. This enabled me to command the stone, and to remove it without much force.

The patient's sufferings during the operation were very acute, and the shock upon the nervous system was severe.—The bladder was cleansed from blood, a catheter introduced, the bandages were removed from the hands and feet, and she was laid in bed. To revive the patient, and alleviate the pain in the pelvic region, morphine, ammonia, and wine were administered, hot bricks to the extremities and hips, and warm fomentations applied to the pubis and hypogastrium. In three or four hours re-action came on and continued through the night, but abated the next day. It is unnecessary to detail the daily symptoms and treatment. Suffice it to say, that the urine flowed freely, and all the secretions were soon established. In a week or so she was enabled to retain her urine from two to four hours, and was perfectly relieved from all those harassing symptoms which resulted from the presence of stone. Fifteen months have now elapsed since this operation, and she informs me that her retentive power is as perfect as she could expect or desire.

The stone removed in this case is of an ovate figure, very regular in its outline, and of a dark brown color. Its surface was covered with cuboidal crystals, exceedingly acute at their projecting angles. It is $2\frac{1}{2}$ inches in length, $2\frac{1}{4}$ inches in width, and $\frac{3}{4}$ of an inch in thickness, weighing $3\frac{1}{2}$ ounces.

Case 4.—*Depression of the Dorsum Nasi.*—Some time in the month of March, 1847, Miss C. Y. came from her residence, in the country, to consult me respecting a deformity which she was exceedingly anxious to have removed. The history of the case is nearly as follows:—In the summer of 1840, she observed a "red spot," probably erysipelatous, just below the inner canthus of the right eye, on the side of the nose. It was tender to the touch, and spread rapidly downward, and very soon involved the integument, cartilages, and mucous membrane of the nose. The inflammation terminated in ulceration and complete destruction of the lateral cartilages, and that portion of the septum nasi which was contiguous to them. Inflammation finally subsided, leaving the integument and mucous membrane entire, but left that portion of the dorsum of the nose between the osseous bridge and the alar cartilage, depressed. About six or eight months previous to this attack, she was severely salivated in consequence of a very liberal exhibition of calomel during a course of remittent fever; whether the disease of the nose was the result of mercurial action, I am not prepared to decide.

I expressed an opinion that the deformity might be removed or greatly modified by a surgical operation. She left me with a promise soon to return; but did not, in consequence of her fears and opposition of friends, till the middle of April, when she informed me she had fully made up her mind to submit to whatever I thought proper in her case.

Dr. Bardwell, a dentist of Troy, N. Y., was in our city at the time, and proposed to administer the "soporific gas," which is but another name for the "letheon," or ethereal vapor, for the purpose of rendering her insensible to the pain of the operation, to which my patient as well as myself consented.

The instrument employed for dividing the parts, was similar to a tenotomy knife—the handle four inches long, the blade, an inch and three-fourths, one inch of which from the point was sharp and two lines in width, the remainder was rounded. After she had inhaled the ethereal vapour about five minutes, and as I supposed was fairly under its influence, in presence of Dr. Gay and my private students, I commenced the operation by passing the point of the instrument into the left nostril, and penetrating the mucous membrane near the septum, at the point where the depression commenced; carrying it onward beneath the integument, till its point had reached a horizontal line corresponding with the floor of the orbit; I then divided the soft parts freely from the bones of the face by carrying the knife nearly as far outward as the infra-orbital foramen. Turning the edge of the instrument towards the median line, I dissected up the integument over the bridge of the nose a little to the right of the median line. Withdrawing the instrument, I introduced it into the right nostril, divided the septum where it resisted the elevation of the superimposed integument, and then dissected up the soft parts on the right side to the same extent that I had done on the left.

By approximating the cheeks, I was now enabled to raise the bridge of the nose as much as I desired. The operation was entirely subcutaneous, no incision or wound having been made in the integument. The mucous membrane was punctured only at two points.

Having been prepared with two pieces of sole leather, one inch long, and half an inch wide each, previously perforated by numerous holes, also a long silver pin with a strong head and a spear point made of steel, I passed the latter through one of the pieces of leather near its centre, and then, raising the bridge of the nose by approximating the cheeks, I passed the pin through the base of the nose just in front of the nasal processes of the maxillary bones until it emerged from the opposite side. The pin was then slipped through the second piece of leather, and the two approximated until the bridge of the nose was sufficiently raised, when the point of the pin was cut off and the projecting extremity coiled upon round pliers, so as to keep the leathers firmly fixed.

The patient bore the operation with remarkable firmness. Just before I had completed the dissection, she called loudly for another draught of ether, but the mouth and fauces were so much obstructed by the hemorrhage that I was obliged to withhold it. She subsequently remarked that she suffered very little pain until the last part of the operation, that the sensations which she experienced were more like those of a disturbed and troublesome dream, than any to which she could compare them.

The first five days after the operation the condition of the parts appeared in the most prosperous state; she was confined to her room and mostly to a recumbent posture. The night previous to the 6th, from a change of temperature and a removal of the bed-clothes, she took a severe cold. The latter part of the 6th, inflammation attacked the parts, particularly around the upper portion of the nose. I succeeded, however, in moderating it until the 10th, when it suddenly took on an erysipelatous character; the face swelled very much, the part became puffy, livid, and sloughing seemed inevitable. I immediately removed the pin and leathers, and made an incision down to the bone, to relieve the tension and give exit to the grumous blood—this procedure had the desired effect. All the unfavorable symptoms began speedily to subside. At the same time, strict attention was paid to the general system with anodyne and warm water dressing to the part affected.

On the 12th day after the operation, the parts were so much relieved that I re-applied the apparatus and retained it 24 hours; its application was repeated every alternate day till the 6th of the present month, (May,) the 19th of the treatment, when it was laid aside altogether.

May 13. Since last date, the livid color of the skin has been continually subsiding. The part formerly depressed maintains a natural prominence, and from all appearances, the operation is likely to prove quite successful; and if so, will be a rich reward to the unfortunate patient. The subcutaneous character of this operation, presents such obvious and unquestionable advantages over the ordinary methods of dividing the integuments, particularly of the face, that they need not be dwelt upon here.

Case 5.—*Epilepsy—partial Hemiplegia of right side, occasioned by fracture of the skull.*—R. C., aged 18 years, light brown hair, sanguine nervous temperament. Nine years ago, this young man was thrown from a horse, and his skull fractured by a blow from one of his hind feet, posterior to the coronal suture, midway between the angles of the left parietal. A portion of the bone was depressed, but the symptoms of compression were not very urgent at the time. Two or three physicians were summoned immediately, who made an effort to raise the depressed bone; failing in the attempt, the wound in the scalp was closed, with the remark that it could be elevated at any time thereafter, should the symptoms demand it. In three days after the injury, complete hemiplegia prevailed. On the 10th, there was great restlessness, with increasing and fearful symptoms of compression. One of the physicians introduced a probe through the fissure, down to the dura mater, which gave exit to a large quantity of bloody serum. This afforded immediate relief. As the opening inclined to close, the probe was repeatedly introduced, so that the discharge continued for three months, and then ceased altogether, and the wound healed.

For four or five years after the accident, the paralysis gradually subsided, so that he enjoyed a comfortable use of all his muscles. Three years ago, he had an attack of epilepsy, which has continued to recur as often as once in four weeks, ever since.

May 12th, 1846, this young man was brought to me by his father, for examination and advice. Symptoms at this time, were excitable nervous system; frequently fretful and morose; pulse, 100 to 120; tongue coated; bowels constipated; appetite usually good, frequently voracious; stomach troubled with acidity and flatulence. At the seat of injury, there was a marked depression of the skull. Since the attack of epilepsy, there has been much pain in the left side of the head, with a twinging sensation under the point of fracture. To such a state of dejection and wretchedness has he been reduced, that he expressed a desire "either to be cured, or killed by a surgical operation."

I considered this a fair case for the application of the trephine, and advised accordingly; to which the patient and his father readily consented; and on the 20th of the same month, I visited their residence for the purpose of performing the operation."

In presence of Dr. Bigelow, Carney, Klapp, Landon, Crawford, and several medical students, I proceeded with the various steps of the operation; dissecting the scalp, and the application of the trephine in the usual manner, during the whole of which the spirits of my patient were buoyant and playful. On removing the portion of bone included in the trephine, I found upon its internal surface a deep sinus, half an inch in length, and extending more than half way through its entire thickness. At one side of the sinus, there projected, perpendicularly with the surface, a sharp spine nearly one line in length. In other respects the dura mater and bone presented a healthy appearance.

The wound was now dressed with one suture at the angle, adhesive strips, compress and bandage, and patient placed in bed.

Perfect quietness was enjoined, and all visitors excluded. He soon became perfectly calm, and felt great confidence in the success of the operation. This was four o'clock, P. M.; at six o'clock he seemed much inclined to sleep. At seven, we found it difficult to wake him; and at eight o'clock, to our great surprise, with a sudden scream, he was seized with an epileptic paroxysm. The paroxysms continued to recur, without a single lucid interval, until he had seven of them; the last of which occurred about four o'clock the following morning. The convulsions had torn all dressings from his head, and the divided parts appeared like lifeless integuments bathed in cold water. I readjusted the dressings, and to my surprise, two hours afterwards, I found the compress, bandage, pillow, and linen about the head, perfectly saturated with limpid serum, for the source of which I could not account, except that it passed through the opening in the skull. His consciousness not returned, pulse rapid, weak and fluttering. At eight A. M., I left, with orders to give him a draught of salts and senna, as soon as he became conscious, with injunctions for the father to write me daily of his condition and symptoms—extracts from which are given below.

"May 21, eleven o'clock, A. M. R. has had no fits since you left, but there is increased discharge of water from the wound."

"22d, one o'clock, P. M. Has had a comfortable night's rest; less nervous than for weeks, no pain, swelling or fever; water still continues to flow, but less in quantity. It has been so great, as to wet all the dressings, a folded sheet under his head, and pillow, in two or three hours."

"23d. Had another fit this morning, at one o'clock; is now quite calm and in a perspiration."

"24th, eleven o'clock, A. M. Rested well last night, less nervous than for years. No pain, heat or swelling of the head, a little fever. The water still flows from the wound."

"25th. Rested very well last night. All the symptoms improving, water has ceased discharging from the wound."

"26th. Quite comfortable; no more discharge of water; head free from pain; wound seems to be healing."

27th. I visited my patient, and found him in a cheerful and most encouraging condition; has no pain or confusion of intellect, sleeps better than before the operation, wound healing rapidly. Prescribed an issue to the arm. Abstemious diet and avoidance of all sources of intellectual and physical excitement.

"29. Still improving; thinks his speech improves; also the use of his right arm."

Aug. 1st. Patient came to my office; health improved in all respects; more fleshy, vigorous and less nervous; sleeps well; stomach entirely free from acidity and flatulence. Skin has become moist, natural, and free from a morbid sensibility, which was formerly a great annoyance.

Since last date, I am informed that the patient has had several attacks of epilepsy, but at greater intervals and of less violence. Should they continue to recur, the operation must, of course, be considered unsuccessful.

I have been induced to report this case partly from paucity of information on the subject in our standard works and periodicals, and partly from the enormous quantity of serum discharged, during the first five days after the operation, which could not have been less than half a gallon, and probably much more.

Case VI.—*Necrosis of the Humerus, of 25 years' standing, cured.*—L. Rhoades, of Runnelsburgh, Ohio, aged forty, twenty-five years ago, when fifteen years of age, went into the water when warm to bathe; soon afterwards he was attacked with ostitis, which was followed by necrosis of a portion of the right humerus, near the shoulder. A fistulous opening remained open for two years, and spontaneously closed, and remained apparently sound for twelve years. Eleven years ago he received a blow on the arm over the site of the old disease. Ostitis and necrosis again followed. A fistulous opening has continued ever since. He has suffered every species of maltreatment for the disease, by regular physicians, as well as quacks. Nov. 12th, 1846, I advised and performed an operation, with the assistance of Drs. Smith, Carter, and Lathrop, for the removal of the sequestra. I laid the upper portion of the humerus bare for four inches, and with a necrosis trephine, mallet, chisel and gouge, penetrated the cavity, which contained some half dozen spiculæ of dead and detached bones. These were removed; the cavity filled with lint, and the arm dressed. April 18, 1847. A few days subsequent to the operation above described, I passed a probe through the enlarged opening, and found that there were still several small spiculæ of dead bone, in the medullary canal, from two to four inches from the outlet. For the purpose of discharging them, I formed loops of small annealed iron wire, and by passing them through the aperture into the canal, downward, they would slip by the loose spiculæ, but on withdrawing them, the bones would become engaged in the loops and be dislodged and removed by these means. In this manner I removed as many as in the first operation, and all that remained in the cavity. Subsequently, the opening closed rapidly, and cicatrized perfectly, so that at this date the arm appears entirely sound, and strong as the other.

Case VII. *Foreign Body in the Ear.*—L. C., from Circleville, a little girl of nine years of age, five years ago put a piece of glass into her ear, about the size of a small pea, exceedingly sharp and angular at each extremity. It was a broken piece of a glass rod, one quarter of an inch in length, and of the same diameter. In attempting to remove it from the ear, she crowded it down to the *membrana tympani*. Its points and sharp edges proving a source of irritation, caused a destruction of the membrane by ulceration. It then found its way into the cavity of the tympanum. Since its lodgment in the ear, several physicians had attempted its removal, but without success; each effort being attended with great nervous excitement, and followed sometimes by severe indisposition. On the 20th October she was brought to my office for my advice. I found, by examination with the speculum, that the piece of glass was fairly in the tympanum, and, consequently, its dislodgment could be effected with difficulty. I procured a very long and slender pair of forceps, a little curved, and tipped with broad, spoonlike extremities, with their concavities facing each other. I introduced them down to the foreign body, and felt it distinctly, but could not separate the arms of the instrument widely enough to engage it within its grasp. I then drew the temper from the forceps near the points, in a lamp, and so bent each blade backward, that when they were brought into contact the extremities were a little separated. I now introduced them again, and with some difficulty grasped the glass, and with an oscillatory motion removed it.

In treating of foreign bodies in the ear, authors usually recommend the syringe, or a wire, or probe bent into a hook, as the most suitable means for their removal. They tell us that the forceps is an improper and dangerous instrument for this purpose. This is not according to my experience. I have, in my practice, in fifteen years past, had a large number of cases of this kind, and I could never succeed with either of the first-named instruments, but never failed with the latter.

Case VIII. *Successful Operation of Staphyloraphy.*—L. Treat, æt. 25. Blind Asylum, Ohio. This young man has been a pupil in the Ohio Institution for the Blind, for a number of years, and in consequence of his complete and irremediable blindness, together with the extreme difficulty with which he can make himself understood, on account of his cleft palate and excessive stammering, he has been retained much longer in the institution than the usual time. For two years past he has occasionally requested and even importuned me to operate upon his palate, assuring me of his entire confidence in his ability to overcome his stammering, if his palate were cured by an operation. Looking upon the operation as one of doubtful success, it having failed in a large majority of cases, in the most skilful hands, where, like the instance before us, the fissure extended, not only through the velum, but through a portion of the hard palate, I for a long time hesitated to undertake the unpleasant task. Such was his anxiety to submit to an operation, however, that he prevailed with and obtained the consent of the trustees for that purpose. For several weeks I had him under preparatory treatment, which consisted in attention to the general health, and the frequent application of the finger or some other foreign body to the fauces, fissure of the palate, and root of the tongue, for the purpose of rendering the parts accustomed to their contact. May 8th, 1847. In presence of the class and several members of the institution, I proceeded to the operation. I placed the patient in a low chair, and stood in another behind him, and while his head, thrown back, rested upon my knees, and opening his mouth as widely as possible, I introduced a straight bistoury, and passed it through the palate just anterior to the angle of the fissure, and then carried it backwards towards the uvula, dividing its border upon the right side. Seizing the uvular angle on the left side with a pair of dressing forceps, I passed the bistoury through the posterior, and carried it forward to the point of commencement of the first incision. The strip of mucous membrane now remained attached at the three angles, the anterior and two posterior. These were divided with the scissors. The proceedings were here suspended for awhile to allow the patient to rest, and the hemorrhage to cease, which was not excessive, and was soon arrested by the application of cold water. I now passed three ligatures of Sadler's silk, in the manner described by Prof. Mutter, of Philadelphia, which is decidedly the most difficult part of the operation. It was accomplished with a pair of Physick's artery forceps, one half longer than usual, a pair of long dressing forceps, curved at the point, and three short and strongly-curved needles about three-quarters of an inch in length. The parts were drawn together by the ligatures wound around the fingers, the first knot held by the straight dressing forceps, until the second turn and tightening of the surgeon's knot was effected. After the knots were secured, the parts on each side seemed very tense. To overcome this, I made an incision on each side parallel with the molar teeth, nearly down to the bone. The tensor palati, levator palati, and constrictor isthmii faucium acting together, rendered the velum and anterior pillar of the fauces exceedingly tense and prominent, quite too much so for the safety of the parts during the process of adhesion. I accordingly divided these pillars on each side freely, with the scissors, and all the muscular fibres that seemed materially to antagonize the tractile powers of the ligatures. The patient, after clearing the parts of blood and mucus, was placed in bed.

To secure perfect rest, one-fourth of a grain of morphine was administered, which produced the desired effect. For nourishment, the white of two eggs was mixed with a tumblerful of water, and a tablespoonful given every two hours. The palate and tongue, to be frequently bathed with mucilage. May 12th. Soon after the completion of the operation, he seemed to suffer from frequent spasms of the muscles of the palate and fauces, but the pain and inconvenience arising from it, gradually subsided under the influence of anodynes. On the 9th and 10th, the swelling and inflammation threatened to slough; but on the 11th, the symptoms abated, and the swelling began to subside. On the 12th, it had nearly disappeared. The two anterior ligatures, which were producing ulceration, were cut and removed, without pain or difficulty. An opening was observed through this portion of the fissure as large as a pea. Deglutition less painful; complains of hunger and thirst; pulse a little accelerated. His bowels have been freely moved by injections, and to nourish the system, enemata of chicken water have been administered every night. May 13th. Patient rested well last night. Remaining stitch becoming loosened by ulceration, was removed. The opening above mentioned about the same; the remainder united.

Art. IV.—*Trial of Dr. Foote, for the Murder of his Wife.*

Among all the multifarious duties of the physician, there is perhaps no one which involves more responsibility, greater self-control, or more varied acquirements, than the practice of Medical Jurisprudence. As a medical witness, he has duties to perform as regards both the prisoner at the bar and the sovereign people. In his hand are not unfrequently placed the liberty or life of the accused.

A slight error in judgment may consign the innocent to wear out his life in endless servitude, among felons of the deepest dye, or condemn him to an ignominious death; and, on the other hand, it may aid the veriest criminal to slip through the distensible meshes of the law, and "go unwhipt of justice."

It has occurred to me that the profession would be very greatly aided in the exercise of this most responsible duty by a more frequent publication of medico-legal cases, with such notes and comments as they would seem to admit, either for or against the opinions advanced; and it is with this view that the following case is reported.

In giving the details of the case, I have, of course, confined myself entirely to that part of it which involves the medical testimony, and if, at any time, I refer to facts which are not found in the abstract of the evidence I have given, they are such as were testified to on the stand by some one of the witnesses.

The People, *vs.* Dan. Foote,	Court of Oyer and Terminer for Chenango county, September, 1847.—Judge Mason presiding.—Indictment for Murder.

It appeared in evidence, that on the 19th day of January, 1847, Dr. Foote, the prisoner, inflicted sundry bruises by kicking, on the person of his wife, in consequence of which, it was asserted, she died on the 18th of February following.

The following are the symptoms and treatment of the case as developed by the testimony of the different witnesses.

On the 20th of January she complained of being bruised almost to death, and showed to one of her female friends a bruise on the very lowermost extremity of the spine, half as large as the hand, very black, and very much inflamed. On the 26th she was troubled to sit on the chair, complained of being lame, of pain and soreness about the lower part of the abdomen and in the side near the hip, and also of the bruise above-mentioned. The side was examined, but no external marks were discovered. On the 30th she was about the house, but still complained of the pain and distress in the side. At this time a bruise was seen on the knee as long as the hand and two inches broad, which was black and blue. At this time also she appeared quite melancholy. The week following this date she was seen occasionally about her work, passing to and fro about her rooms, bringing in wood, etc., her motions, however, did not appear quite so quick as usual.

On Saturday, February 6th, she was taken crazy; during the day, one of the witnesses said, she appeared in great pain, and was continually putting her hands across her; she was cramped a good deal, cried, talked incoherently, and on Sunday she was still more crazy, and at one time she was in the street bare-footed and bare-headed. On Sunday evening a physician was called in; he found her sitting in a chair, she appeared exhausted, was insane, language incoherent, pulse quick and frequent, 120 in the minute. Camphor and water was prescribed, and 30 drops of laudanum at bed-time. The next morning she was very furious and strong, pulse reduced to 100, but showed no more excitement. She was bled two-thirds of a pint with some apparent relief, but she still remained furious.

During this week it is impossible to gather from the evidence a connected statement of her symptoms from day to day—by times she was raving and frantic, and used very great bodily exertions, leaping and springing about, sometimes on the bed and sometimes off, climbing upon the window-sills and falling off, falling over chairs, sometimes dancing, and at times so great was her strength that two or three were employed in holding her; at other times she would sink away, her muscles would relax, and she would fall into a sort of stupor; at times she slept for a little while. During the frantic turns, her face would become flushed, head hot, pulse active and hard, eyes red, the lids partially closed, so that the eyes appeared smaller, and the sight was turned down. During some of these paroxysms, cold water was applied to the head with apparent relief. When the paroxysm was off, she became pale, frequently pressed her hands across the abdomen, and seemed to be in pain. She could scarcely be induced to take either food or drink; when it was put in her mouth it would sometimes run out, and at other times after retaining it for a short time she would spit it out, and on the whole she swallowed but very little. Her bowels were extremely costive—injections produced no effect. There was a slight evacuation on Wednesday, but on the following Sunday, the 14th, a dose of Croton oil produced a copious discharge, pretty natural in appearance. Urine was scanty, and at last there was a perfect retention, so that twice, with an interval of thirty-six hours, resort was had to the catheter. The first time was on Monday night preceding her death, and on this night there was, for a time, considerable rigidity of the muscles of the arm and lower extremities, which, however, wore off in a few hours.

There was not, at any time, either dilatation or contraction of the pupil observed—there seemed to be no difficulty of sight or hearing until Saturday, the 13th, when there was some evidence that the latter was morbidly acute.

For the first few days she pulled at her tongue so that it lost all appearance of a tongue; it was cracked and dry, and became *very* dry on the Sunday before she died; she sometimes grasped her throat and tried to strangle herself. She had no lucid interval after the attack, and seemed to be in a state of total unconsciousness, or as the witness expressed it, he "did not think she knew anything."

On Saturday, the 13th, there was a change in her appearance, and danger was apprehended. Her eyes looked heavy, pulse hard and full, and respiration more rapid. On Sunday morning early she was bled two-thirds of a quart. On this day her face was pale and deathly, and eyes glassy. At this time her physician perceived that she "flinched" when pressure was made in the right iliac region, but one of the witnesses in making an examination of the bruises on the preceding Friday, discovered, a little forward of the right hip, a swelling about the size of an egg, and, to use her own expression, "it was hard and callous—the bunch was below the skin and loose." There was very little, if any, difference in the color of the skin, over this tumor. This witness describes the bruises, on this day, as being yellowish-green. There were marks across the back as if made with a whip, they seemed scabbed, and as though the skin had been broken.

But little medication, it appears, was employed, owing to the very great difficulty of controlling the patient; but among other appliances, fomentations with "sweat-weed," (Polygonum Pennsylvanica,) were liberally used.

On Thursday morning, the 18th, she died. The countenance collapsed and the pulse grew weak, but yet she struggled violently, and not more than five minutes before she died she raised herself upon her feet. The fits of muscular exertion continued till the last. There was no diminution of the animal heat. The witness says her hand was warm as ordinary when she died, and he could discover no difference between the heat of that and the rest of the body.

A post-mortem examination of the body was made in the afternoon of the day on which the woman died. It was attended by four physicians, of whom the coroner was one. One of these assumed the direction of the dissection and took notes of the morbid appearances, but for some reason, unknown to the writer, he was not called on to give evidence in the case, although attending court for that purpose. The other three physicians were called as witnesses, and related from memory the appearances on dissection, neither of them having taken notes at the time.

The morbid appearances developed on the examination were the following:

The surface of the body exhibited some twenty or thirty bruises, the greater part of these were on the limbs, but none of them were of any great size. There were a number on the seat, which appeared to have been made for four or five weeks. There was a mark across the shoulder and the back, and one hip was black from the settling of blood. No other bruises were discovered till after the body was opened.

The thorax was first examined, and there all the contained viscera were found sound. The cavity of the abdomen was next explored. The stomach was found diseased. More than half of the mucous membrane of the superior portion was of a slate color, but there were no ulcerations. Another medical witness described this appearance of the stomach as an *ecchymosis*, and the upper portion as somewhat inflamed. From four to six inches in length of the ascending colon, beginning at its head, and half or two-thirds of its circumference, was in a gangrenous condition, or mortified completely dead and black, but there was no inflamed appearance surrounding the gangrened part. The peritoneum lying directly over the diseased intestine was discolored—one witness said it was inflamed and had a yellowish appearance. After this diseased intestine was found, a discolored spot on the skin about the size of half the hand was discovered lying directly over it. The intestine was not cut through, nor was its strength in any way tested. It was neither torn nor ruptured. The witnesses said nothing of any gangrenous odor. The discolored portion of the abdominal peritoneum was not cut through, nor was the discolored skin washed. There were neither adhesions, effusions, nor suppuration within the abdominal cavity. There was a morbid appearance of the neck of the uterus—one witness describes it as inflamed and almost gangrened, and another says it was considerably effused with blood.

The head was not examined.

I have thus given, in as condensed a manner as I have been able to do, the symptoms and treatment of this case, together with the appearances on dissection, confining myself to the language of the witnesses as much as was consistent with giving a connected detail of the whole affair.

The life or liberty of the prisoner depended entirely on the bearing of the facts here set forth. If these show conclusively that the death of the woman was the necessary consequence of the personal injuries she received, the condemnation of the prisoner was undoubtedly an act of stern justice; but if, on the contrary, the facts detailed show that there was any doubt as to the cause of death, the prisoner, most certainly, should have had the benefit of those doubts.

The wounds inflicted on the deceased were not of themselves necessarily fatal, but it was alleged were accidentally so by having induced the disease which terminated life.

The immediate cause of death was, in the opinion of the medical examiners, mortification of the colon.

Judging from the symptoms as elicited on the trial, and from the morbid appearances on dissection, is there good reason to believe that acute inflammation of the colon existed of sufficient intensity to produce mortification, and was that disease produced by the injuries received?

It will be recollected that the bruises were inflicted on the 19th of January, and that the woman died on the 18th of February, twenty-nine days afterwards;—that on the 20th of January she was heard to complain of being bruised and sore, and showed a severe bruise on the lower extremity of the sacrum,—that she was not heard to complain of pain in the right iliac region, or in the bowels at all, until the 26th,—that then the part was examined, but no bruised or discolored spot was discovered, nor was it distinctly proved that any bruise was ever received there,—that it was not till the 14th of February that the physician discovered that she "flinched" when pressure was made in the iliac region,—and that her nurse had discovered a tumor in that situation on the Friday previous.

It is extremely difficult to conceive how a blow upon the extremity of the sacrum should produce an inflammation of the head of the colon, without a stretch of the imagination rather beyond what should influence one in a case where life and death are concerned. This proposition may therefore be set aside as untenable.

If a person receive an extremely severe blow on the abdomen, rupture of some of the contained viscera, or other disorganization, might happen without leaving any external marks, (S. Cooper, Beck), but in this case death would soon occur. If the blow were less severe, inflammation of the peritoneal linings of the abdomen and intestines would happen, and consequent adhesions, or other indications of the presence of inflammation. "The effects of such violence are, inflammation of the injured bowels, and their adhesion to the inside of the peritoneum." (S. Cooper, Surgical Dictionary.) In the case under consideration, dissection discovered no adhesions, no effusions of coagulable lymph or serum, no suppuration, no softening or disorganization of the part, no gangrenous odor, nothing but the discolored spot on the colon ; and this black spot, if the witness was distinctly understood, was terminated abruptly at its circumference by the undiseased portion of the intestine.

Injuries to the peritoneum are, in ordinary cases, quickly followed by signs of inflammation, so soon, indeed, that it is hardly a supposable case that their effects should continue for a month, and then destroy the patient without leaving some distinguishing marks. "The exudation of coagulable lymph is the most characteristic of all the products or effects of inflammation, and that which affords by far the most satisfactory proofs of its presence. Lymph is both very early and very abundantly produced when the inflammation is seated in the serous membranes." (Macrobin, Introduction to Practical Medicine, p. 32.)

It is asserted that the dark-colored spot on the colon was mortification : but aside from the facts that there were none of the ordinary signs of inflammation seen, and no marks of gangrene, except the color, noticed, it is well known that cases do frequently occur, in which this appearance is found, and in which there is no disorganization of the part, as necessarily happens in cases of gangrene ; nor does this appearance always indicate even an approach to that state.

Abercrombie (Diseases of the Stomach and Bowels,) relates several cases of this kind, and one in particular (page 165), where a young lady died of abscess of the cerebellum, with symptoms of disease in the abdomen, in which "the caput coli, and about eighteen inches of the lower extremity of the ileum, were of a very dark livid color, without any change in their structure." "The inflamed portion of the bowel," says Watson, (Practice, p. 173,) is often of a very dark color, and even almost black, from the great congestion of blood in its tissues. Now this black color has sometimes been erroneously set down as an evidence of gangrene. You must not trust to the mere color, however. If the coats of the bowel be firm, and the peculiar odor of gangrene be wanting, you are not to conclude that mortification of the bowel has taken place, simply from the dark appearance of the intestine."

"It is by no means uncommon," says Hodgkin, (Morbid Anatomy, p. 40,) "to find both the serous membranes and false membranes formed upon them of a very dark color ; but this is of a different nature from gangrene, and is to be carefully distinguished from it. It depends upon an altered condition of the blood in the minute vessels, and is apparently most frequent in situations in which inflammations or irritations had at one time existed, but had subsequently subsided. Or it may even be cadaveric, and depend on altered blood, either in its vessels, or extravasated, or transuded."

All these facts show pretty strongly, if not conclusively, that *this black spot* on the colon might have existed without gangrene, and even without inflammation. It may have been the product of irritation, or simply the settling of blood after death. In addition to all these negations, I will add, that it will be seen, on reference to the symptoms of the case, that the manner of death was not such as ordinarily occurs where mortification takes place.

If, then, the pathological signs and the diseased appearances in the abdomen were not a consequence of external injury, and if gangrene did not exist, the question may be asked, what disease *did* exist there, and what was its cause?

I apprehend that all the symptoms of the case referable to the abdomen, show pretty unequivocally, that there existed an impacted fæcal accumulation in the cœcum or colon, producing that form of colic which has been called stercoraceous. The obstinate constipation, which was not relieved fully till the operation of the Croton oil on the 14th of February, four days previous to death,—the pain and tenderness in the iliac region,—*the tumor there*,—the scanty urine,—the pressure so frequently applied to the part by the patient,—and, lastly, let me add, the post-mortem appearances—all indicate that this was the case.

The symptoms of this disease are somewhat intermediate, it is well known, between those of colic and inflammation, and if not relieved, it passes readily into the latter state. "A certain degree of pain on pressure, sometimes attends a simply distended state of the bowels," (Abercrombie,) and in this variety of colic there is less distension of the bowels and irregular puffiness in any part of the abdomen, and the pain which is referable to the colon, is more fixed than in flatulent colic. In some thin subjects, the indurated matter may be readily felt in the colon, particularly at its arch. and in each iliac region, through the integuments. (Stokes and Bell.)

If impacted fæces produce no other effect than to create an irritation, and the patient die from any other cause, still a black spot may be found on the irritated portion of the intestine, corresponding with the locality of the impaction, and in that case there would be found none of the ordinary appearances of inflammation.

In reviewing the symptoms of this case, we find that there is still a distinct set, whose origin is apparently the brain. Such are the chaotic mania,—the frantic turns,—great bodily exertions,—sleeplessness,—the flushing of the face, hot head, and active and hard pulse during the turns of excitement,—the red eyes,—the partially-closed lids,—the relief afforded by cold ablutions to the head,—the retention of urine,—the partial rigidity of the muscles of the arm, &c.,—the morbid acuteness of hearing,—the pulling at the tongue, and, finally, the manner of death. The question was asked of the medical witnesses for the defendant, "What, in your opinion, was the disease of which this woman died, judging from the symptoms you have heard stated, and without reference to the post-mortem examination?" In view of the above symptoms, it was answered, that in their opinion, she died of disease of the brain. In further confirmation of this opinion were the facts that the woman had been subject to fits of cerebral excitement, which were relieved by bleeding, and one of the physicians testified that he had thought for three or four years that she was of unsound mind. As the brain was not examined, the truth or falsity of this opinion could not be proved.

It remains to make a few remarks on the post-mortem examination. I have already mentioned that the district attorney did not call the physician, who conducted the examination, as a witness. The reason for this neglect is not known, and neglect it certainly was, for without this witness, the best possible evidence could not be had, and such the ends of justice always demand. The district attorney is the minister of justice, and not of vengeance, and if he had even known that the evidence of the witness would have gone in favor of the accused, he should have been called upon the stand. Public justice does not require that the accused shall, at all events, be convicted, but that the truth shall all be told. We must, then, take the account of this examination as we find it,—that is, according to the best recollection of the lookers-on.

It must necessarily be characterized as essentially imperfect, in the fact that the brain was not examined. All writers on medical jurisprudence agree in directing (and common sense would seem to dictate the same), that under all circumstances, all the cavities of the body should be explored, because, although disease in one part may be found which may be supposed sufficient to account for death, still, on further examination, a still more grave cause may be discovered; and besides, if all the cavities are not examined, it leaves room for doubt, and the objection may be made, that the cause of death might have been found there. (Guy.) For these reasons, the medical witnesses on the part of the defence, when asked what, in their opinion, was the cause of death, answered, that they could not give an opinion, because the post-mortem examination was imperfect and insufficient. In making up their opinion that the cause of death was mortification of the intestine, the examining physicians founded it entirely on the appearance of the part; one of them, indeed, said expressly, that he judged solely from that circumstance. It has already been shown from good authority, that a dark color of the part is not sufficient evidence of mortification. The diseased appearance of the stomach was probably nothing more than is frequently found when no organic lesion of that organ precedes death. "There is hardly a stomach," says Dean, (Remarks on Medical Jurisprudence,) "of those who die of short illness, that does not present suffused spots; the gastric juice often acts as a solvent after death, and for this cause the stomach has been found eroded in different parts, which by the ignorant may be taken for morbid appearances." The suffused appearance of the os uteri was undoubtedly nothing more than a cadaveric appearance, owing to its depending position.

I should not have noticed these appearances, were it not for a slight discrepancy in the testimony of the medical examiners—one thought the stomach diseased—another referred it to the solvent power of the gastric juice. One thought the os uteri almost gangrened, another discovered no signs of inflammation about it.

In relation to the bruises on the body and limbs, it is pretty evident they were made at different times, part of them having the appearance of old bruises, of which the most severe was that on the sacrum; and those on the limbs, with the exception of the one above the knee, were described as recent, and undoubtedly were made by the patient herself, during her violent struggles and exertions. The question of the contusion on the abdomen is one of importance. It has already been shown that the character of the abdominal disease, as shown by the symptoms and by the inspection after death, renders the fact an exceedingly doubtful one; and the morbid appearances of the integuments do not, most certainly, tend in any degree to elucidate the matter.

The discolored spot on the peritoneum was said to be yellowish, or buffy, and might have been a mere stain arising from contact with the diseased spot beneath, and so one of the witnesses intimated, while another called it inflamed, and another thought it had been in that state, and was getting well. The discolored spot on the skin, it does not appear, was very critically examined; there certainly was no ecchymosis, for none was discovered either before or after death,—no incision was made into it to discover whether blood was effused, as would have been the case from a contusion, and the skin was not washed, although fomentations with a coloring material, (Polygonum Pennsylvanica,) had been freely employed.

The verdict of the jury was manslaughter in the first degree, and the prisoner was sentenced to the State Prison for life.

With the justice or injustice of the verdict, or the innocence or guilt of the prisoner, I have nothing to do. There can be no shadow of doubt but the prisoner was guilty of the most outrageous, ruthless, and unpardonable abuse of his wife, and for that he should be punished to the full extent that the laws of our country will allow—thus common justice and common humanity would dictate. It might not, perhaps, be objected to that he should be punished to the full extent of his present sentence on "*general principles;*" but when a prisoner stands indicted for "*particulars,*" let those particulars be fully proved, either by facts or by incontrovertible circumstantial testimony.

Art. V.—*An Essay on the Philosophy of Medicine, and the Spirit in which it should be studied and practised.* By N. S. Davis, M. D. New-York.

In the November number of this Journal, we noticed briefly the morbid changes of which our organs are susceptible, and we now proceed to a consideration of the *agents* capable of producing such changes.

And in doing so, we shall again recur to the views of Dr. S. L. Metcalfe on Caloric, more especially as set forth in his article in the number of the Journal to which we have referred. When in our first article on the subject under consideration, we referred to some of the views of Dr. Metcalfe, as represented in his great work on Caloric, we had no thought of either formally reviewing his work, or of giving the slightest offence to its author. And did the closeness and soundness of his reasoning, equal the ease and beauty of his style, we should no more presume to question the one, than to imitate the other. But it seems to us that he is prone to that fascinating, and far too fashionable habit, of reasoning from remote analogies, and of drawing conclusions from the congregation of facts essentially dissimilar, which justifies us in subjecting some of his conclusions to a rigid scrutiny. Thus, when he tells us that Caloric is not only *the* universal stimulant, the sole motor power of the universe, and the cause of all vital action, but also *the vital principle* itself, it becomes us to search well the grounds on which these conclusions are based. Not that we are opposed to any degree of research after the *causes* of things, as Dr. Metcalfe erroneously and unjustly asserts; for that is, in truth, the very task we had undertaken in these essays; but because we would carefully avoid the error, so frequently committed, of adopting some one physical agent as the magic power, the philosopher's stone, which is to afford at once a ready solution of all the intricate phenomena of nature. And we would also avoid the effort, so often made in vain, to find out the nature of the vitalizing agent or principle of life. It seems to us that one of the prominent sources of fallacy in the article of Dr. Metcalfe, is the want of all distinction between the excitors or stimulants by which the processes of living beings are sustained and kept in action, and the principle of life or susceptibility of living beings to the influence of such excitors or stimulants. To make the idea if possible still more plain, we say that all animate or living bodies are composed of matter arranged according to some definite form, and endowed with a principle or property which we term vitality or life, that renders them susceptible to the influence of external agents or excitants. That when matter is thus formed, and thus endowed with vitality or a susceptibility, the presence of certain stimuli or agents, as Caloric, oxygen or atmospheric air, and water, are essential to its state of activity or development. Thus in the seed, we have matter in a definitely-organized form, and also possessed of a susceptibility to impressions; but without the action of certain external agents, no vital phenomena take place. Three things, then, are essential to the existence of organic or vital action, viz.: matter in a definite form; a susceptibility to the influence of external agents; and the presence of such agents. But Dr. Metcalfe confounds the two latter by declaring Caloric to be not only "the most universal stimulant in nature, but the *cause* of stimulability." And for proof, he mentions the fact that vegetables cease to grow in winter; that certain animals become dormant during the same season, and that some fishes may even be frozen and again restored by the influence of Caloric. To show the absurdity of this position, however, it is only necessary to ask, if Caloric is *the* cause of stimulability or susceptibility, what renders the seed or the plant susceptible to the influence of Caloric itself? What renders the dormant seed, the inactive plant, and the frozen fish, susceptible to the influence of Caloric? Surely better instances to illustrate the fact that the vitality or organic susceptibility of both plants and animals is independent of their temperature could not be adduced. For we think even Dr. Metcalfe will not contend that the tree which has ceased to grow in winter, or the frozen fish, is actually dead; i. e., deprived of vitality. Neither will he pretend that any organized body, after being actually deprived of vitality, can be restored by the addition of any amount of Caloric. Hence it is plain, that every organized body must possess an independent principle of life or susceptibility, to enable it to feel the influence of Caloric or any other agent whatever. Nor are we disposed to admit that Caloric is the sole *cause* of vital action, notwithstanding the Doctor's ingenious application of Herschell's rules for determining causes.

It is true, that absence of Caloric invariably induces *suspension* of vital action; and hence it admits the application of Herschell's first rule, viz.: Invariable negation of effect, with absence of the cause. But it is *not* true, that increase or diminution of Caloric alone, without the presence of other agents, will uniformly produce corresponding increase or diminution of effect; and therefore will not admit of the application of Herschell's second and third rules as quoted by Dr. Metcalfe. Indeed, who does not know that all the Caloric in the universe will not cause a single seed to germinate without the simultaneous presence and influence of oxygen and water? Hence every reader will at once perceive that Herschell's rules will apply equally well to either of the latter as the former; for the absence of either of them is as certain to induce "negation of effect," and their increase within certain limits, increased effect, etc. What then is the true inference? Is it, that vital action is caused by the influence of any one external agent; or is it the result of the combined influence of several? Most certainly the latter. And Dr. Metcalfe himself says, in his recent article, "that both oxygen and water are *essential* to the generation and development of plants, is universally admitted." But he adds, "does he (Dr. Davis) believe that oxygen, light, electricity, or any other agent, without Caloric, is capable of producing all the phenomena of animal and vegetable life?" Certainly not: for that would be committing the very same error, of which we have all the while complained, viz.: that of attributing vital actions, which are the result of the combined influence of several agents, to *one* of them.

If any are disposed to question the propriety of calling Caloric an external agent, we must remind them that Dr. Metcalfe has himself fully sustained the doctrine, that Caloric is a *material* body, and hence as much an external or physical agent as oxygen or any other substance. He, however, endeavors to get rid of the direct agency of oxygen in the animal economy, by restricting its use entirely to the production of Caloric, by uniting with Carbon and Hydrogen in the lungs. And, as he accuses us of no small amount of ignorance for maintaining an opposite opinion, and as the subject is of much intrinsic interest, we hope our readers will indulge us if we devote a few pages to its consideration. Two plain questions present themselves, viz.: Does the oxygen of respired air enter into direct union with carbon and hydrogen in the lungs, producing carbonic acid and watery vapor? And is animal temperature maintained by the Caloric developed as a result of such union? We answer both these questions in the negative, for the following reasons, viz.:

1st. It has been found by the accurate experiments of Magnus and others, that venous blood contains free carbonic acid before it reaches the pulmonary organs, and that arterial blood contains an increased proportion of the oxygen gas. 2d. It has been found by all modern investigators, that the amount of oxygen consumed in the act of inspiration does not correspond with the quantity of carbonic acid gas exhaled, but exceeds it by an average of one-sixth. 3d. It has been demonstrated by the experiments of M. Edwards, that animals continue to exhale carbonic acid gas after being immersed in an atmosphere of pure hydrogen. 4th. The experiments of R. E. Rodgers, of Philadelphia, show very conclusively, that fresh venous blood gives off carbonic acid when enclosed in a sack of animal tissue, as a bladder, and surrounded by hydrogen gas, or nitrogen, with just as much facility as when surrounded by oxygen. And 5th. The amount of carbon thrown off by the pulmonary organs, even if we admit it to have been directly united with the oxygen in the lungs, is wholly insufficient to account for the production and maintenance of animal heat. It is estimated by Liebig, and generally assented to by others, that the whole amount of carbon consumed in the human system, by entering into combination with oxygen, is an average of 13·9 oz. every twenty-four hours; and of this about 8·5 oz. are thrown off by the lungs, while the remaining 5 oz. finds exit from the skin, etc. It is farther assumed by the same writer, and indeed by all others who make animal heat depend on the union of carbon and oxygen, that a fixed and uniform quantity of Caloric is evolved by the union of a given quantity of the elements, whether such union take place gradually or rapidly, at a high or low temperature. Now, throwing aside the well-known fact, that oxygen and carbon do not unite at all at common or low temperatures, we ask in all seriousness, whether any reflecting man can imagine heat or Caloric enough to be evolved by the combustion of eight and a half, or even thirteen ounces of carbon, to keep 150 pounds of matter (the weight of a moderate-sized adult) at 98° for twenty-four hours in succession? If there are any so credulous, we would advise them to commence the experiment without delay, by endeavoring, under the most favorable circumstances which they can devise, to keep 150 pounds of meat warm, or at the ordinary temperature of the human body, by the combustion of half or three-quarters of a pound of charcoal or any other form of carbon, during the period of twenty-four hours. On this point Dr. Carpenter, in his work entitled "Principles of Human Physiology," page 682, very justly remarks, that "the combustion of from 5 to 10 oz. of carbon per day, however, would be by no means sufficient to keep up the temperature of the human body to its proper standard; for it has been *experimentally ascertained*, that the amount of Caloric set free by a warm-blooded animal in a given time, is more than can be thus accounted for." Still other facts might be adduced in reference to these same questions, but we deem those already mentioned as abundantly sufficient for our present purpose.

Indeed, the experiments of M. Edwards and R. E. Rogers, are alone sufficient to settle conclusively the question, whether the carbonic acid expired is formed in the lungs by the union of the oxygen inspired with the carbon of the blood, or whether it is a genuine educt from the venous blood in which it existed before it reaches the pulmonary organs. For in the one case, we have animals immersed in an atmosphere of pure hydrogen, continuing to give off carbonic acid until an amount had been expired greater than the whole bulk of the animal; and in the other, fresh-drawn venous blood yielded carbonic acid to an atmosphere of hydrogen or nitrogen just as readily as to one of oxygen, and the process was attended with an equal rise of temperature. When Dr. Metcalfe will reconcile these two facts, corroborated as they are by a host of others, with the idea that the carbonic acid thrown off is the result of a union or "combustion of carbon and oxygen in the lungs," he may well accuse us of being "wholly unacquainted with many of the great leading facts connected with animal heat, and even with the history of what has been written on the subject." Indeed, so well settled is this point, that with the exception of Dr. Metcalfe and Mrs. Emma Willard, we are not aware that a single physiologist of note at the present day, contends that carbon and oxygen enter into direct union in the lungs. Dr. Metcalfe seems to place much reliance on the alleged fact that the lungs and left side of the heart are from one to three degrees warmer than the right side; and he asks with some degree of emphasis, how this is to be explained, "if oxygen does not unite with carbon and hydrogen in the air-cells of the lungs." — We answer in the first place, that the fact itself is at least questionable. For while Drs. J. Davy, Scudamore and Metcalfe make arterial blood in the lungs and left side of the heart from 1° to 2° higher than venous blood, Jurine makes both alike; and Coleman, Cooper, and Martine make venous blood the warmest. The experiments of Davy consisted in severing the blood-vessels of the neck, and immersing a thermometer in the currents of blood flowing from the carotid artery and jugular vein, and subsequently opening the chest and inserting the thermometer in the two ventricles of the heart; while in those of Coleman, Cooper, etc., the animal was first rendered insensible by some injury of the brain or great nervous centre. Now we shall not attempt to decide which of these eminent experimenters is entitled to most credit, but we may very justly claim, that a fact which admits of so much question, cannot be made the basis on which to rest any important deduction. But even if we admit that arterial blood and the left ventricle of the heart are 1° or 2° warmer than the venous blood and right ventricle, it by no means follows that such difference is owing to the "combustion of carbon and hydrogen in the air-cells of the lungs." For Davy, in the very same series of experiments which led him to conclude that arterial blood in the left ventricle was warmer than the venous blood in the right, also found other parts of the body even warmer than the lungs or left side of the heart.—For instance, he relates the following result, which we now recollect, viz: Temperature of left ventricle 103°, pyloric orifice of the stomach 104·5°.— Here the heat of the pyloric portion of the stomach is quite as much greater than the left side of the heart, as is the latter alleged to be greater than the right; but if the heat is generated in the air-cells of the lungs, how can this be explained? Again; when Dr. R. E. Rodgers of Philadelphia enclosed fresh venous blood in a tissue of animal membrane and surrounded it with an atmosphere of pure hydrogen, he not only found that carbonic acid was freely given off and transmitted through the animal tissue, but also that the temperature uniformly rose, and at the same time a quantity of hydrogen had entered the blood through the same tissue. The same result was produced when nitrogen or oxygen was substituted in the place of hydrogen.— Here we have blood placed as nearly as possible in the same condition as in the lungs, and we find the same interchange or absorption of the external gas and exhalation of the carbonic acid, and that too accompanied by a slight elevation of temperature. Now, if there is one fact clearly demonstrated in the whole science of physiology, it is this, *that animal heat is not the result of any direct union "or combustion of carbon with oxygen in the air-cells of the lungs."* If this is admitted, the whole theory of Dr. Metcalfe, both in regard to nutrition and fever, falls at once. For he maintains the very singular doctrine, that the Caloric acquired by the arterial blood in the lungs is used up or rendered latent in the process of uniting the nutrient particles of the blood with the solid tissues. And also that the increased heat of fever is owing to the fact, that during the existence of such disease, nutrition is in a great degree suspended, and the Caloric that in health is absorbed in effecting nutrition, now becomes free, and thus elevates the temperature of the whole system. Thus in the recent article to which we have referred, he says: "It is equally certain, that whenever a considerable portion of all the blood in the body is arrested or retarded in its progress through any one or more of the organs, as in inflammation of the lungs, stomach, bowels, etc., it is prevented from circulating through the lungs; so that being no longer renovated by respiration, it is soon rendered unfit to nourish the solids; the consequence of which is, that the *caloric* which is employed during health in uniting its particles with the solids, and in giving them vital energy, no longer performs its natural office, but *accumulates* in the body, and causes the preternatural *temperature* of *fever.*" And again he says, "that a difference between the temperature of arterial blood and of the solids, is absolutely essential to all the phenomena of animal life, and therefore one of the great leading facts which lie at the very foundation of physiology." Is it possible that Dr. Metcalfe has spent ten years of his life in studying the phenomena and laws of Caloric, and has not yet learned that familiar and universally-acknowledged law: that when matter passes from a rarer to a denser state, as in the conversion of liquids into solids, caloric is developed or set free? Judging from the above extract, we must suppose that he has not; for otherwise he would not make the process of nutrition, or the conversion of liquid blood into solid tissue, a means of absorbing caloric, while a cessation of that process, as in fevers, causes an accumulation of caloric.

Comment on such a position is unnecessary; for so plain a contradiction of one of the plainest facts in natural science, carries with it its own refutation. So also, "the great leading fact" set forth in the last quotation, is a pure assumption. Not only is it destitute of a shadow of proof, but it is directly contradicted by the experiments of J. Davy, and others, one of which we have already adduced, showing the solid tissue of the stomach to be 1·5° higher than even the arterial blood in the left side of the heart. But Dr. Metcalfe accuses us of unfairness or misrepresentation, in the criticisms contained in our first article, and he mentions two instances, viz: one in relation to the effects of sleep on the energies of life, and the other in reference to Caloric being "the cause of stimulability." In relation to the first, we quoted verbatim from his book as follows: "The solution of these queries will be found in the *fact*, that respiration is *always* very much diminished during the night, and arrives at the minimum about midnight, when all the energies of life are *proportionably* reduced." Now, Dr. M. explains by saying, that the reduction of the energies of life here spoken of, is owing not to the diminution of the respiration, but to the predisposing causes of fever. All we have to say of this is, that admitting the explanation, the language quoted is very unfortunate. For if the word "*proportionably*" in the above, refers to anything, it certainly refers to the diminished respiration during the night. Hence he must blame his own language, not us. In reference to the second point, he alleges that by the "cause of stimulability," he means simply, "that Caloric is essential to that *vital property*, or condition of organized bodies, which renders them susceptible to the impression of stimuli." If by this he means to admit, that organized bodies are possessed of an independent *vital property*, and that Caloric is one of the stimulants essential to the maintenance of vital action, then we cordially agree with him. If, however, he means, as his language in many places plainly implies, that caloric is essential to the existence of the vital property, or in other words, that it is the vital property itself; that property which renders the seed susceptible to the influence of heat and moisture, or the dormant plant of winter susceptible to the influence of the genial warmth and moisture of spring, etc., then is he contradicted by all the phenomena of nature, to which he has himself alluded. But we have accused Dr. Metcalfe of practising an imperfect and fallacious mode of reasoning. For example, he adduces the facts that vegetation starts into activity in spring, increases during the summer, diminishes in autumn, and ceases in winter; that the aggregate amount of vegetable and animal life is in proportion to the warmth of the climate; and that, "in the total absence of solar caloric, if such a thing were possible, the beautiful round world, with its myriads of sentient beings, would be a motionless and *lifeless* desert;" and hence draws the conclusion that Caloric "is *the cause* of all physical and vital phenomena." Now, the facts or premises simply prove that Caloric is one of the essential stimuli of vegetable and animal activity, but they do not prove that there may not be a dozen others equally essential; and hence the conclusion that "Caloric is *the* cause," has no necessary connection with the premises. We readily admit that if Caloric was stricken from existence, this world would be a lifeless desert; and so it would be, if any other elementary body, whether ponderable or imponderable, was stricken from existence. Indeed, did Dr. M. ever stop to inquire the effects of striking Oxygen, or Hydrogen, or Carbon, etc., from existence? Hence it becomes plain to every mind, that such suppositions really prove nothing, except the universally-admitted truth, that the Creator has made nothing in vain. Again, he makes *Caloric* the *sole motor* power of the Universe; *the* cause "of all the operations of Astronomy, Meteorology, Chemistry, and Geology;" and "lastly, it is because the heavenly bodies are impelled by the same *ether* (Caloric) that they fly through their orbits—some of them at the rate of more than a thousand miles per minute." If we analyze these conclusions, we shall have the following curious results, viz: Caloric is *the* cause of attraction and repulsion; of solidification, liquefaction and aerification; of contraction and expansion; of movements in masses, and movements in atoms: i. e., it draws the particles of matter together, and drives them asunder; it causes the particles to unite and become solid, and to separate, and become liquid or gaseous; it tends to draw the planets of our solar system towards the sun, and drive them from it at the same time; and yet, instead of making them stand still between two opposing forces, it causes them to move perpetually in a curved line. Verily, a more melancholy specimen of the injurious and blinding influence of an unlimited indulgence in vague theorizing, could not well be adduced. Neither could there be a more impressive illustration of the necessity of adhering strictly, in all our inquiries, especially into the phenomena and processes of living beings, to the most rigid system of induction from facts, and that too from facts well ascertained and directly connected with the subject. We had intended, here, to give our own views of the influences of Caloric on the human system, especially as a cause of disease; but our remarks have already extended so far, that this must be deferred until another occasion.

ART. VI.—*Operation to remedy a Division of the Velum Palati, or Cover of the Palate.*

NEW-YORK INSTITUTION FOR THE DEAF AND DUMB, Sept. 10, 1847.

DR. LEE,—The following account of a surgical operation appears in the last number of the Annals of the Education of the Deaf and Dumb and the Blind—*Annales de l'Education des Sourds-Muets et des Aveugles*—Paris, 1847. A translation may be acceptable to the readers of your Journal. With respect,

J. ADDISON CARY.

Professor Blandin, Surgeon of the Hotel-Dieu, has performed an extremely-delicate operation with rare dexterity and complete success. The subject was a lad of twelve or fourteen years of age, whose pronunciation was very imperfect, his voice resembling that of one who speaks with his nose pinched; he experienced also a difficulty in the act of swallowing. This infirmity was the result of a natural defect. In the middle of the soft and posterior part of the child's palate was a slit, by which the sounds were not sufficiently prevented from extending toward the anfractuous cavities of the nasal fossæ, so that they were retained there in a very disagreeable manner.

Prof. Blandin proceeded in the operation as follows:—he first cut the edges of the opening with a small bistoury, after having previously fastened them below with a long forceps (pincers) furnished with a very fine bit; he then passed a narrow silk ribbon through the two sides of the wound, at the same time piercing the latter at the distance of about five millimetres from the bleeding surface; this being once done, he successively tied tight the three ribbons which he had placed, and the deformity was found completely removed. The whole operation required about ten minutes.

The able surgeon forbade his young patient speaking or opening the mouth to show his throat. Mr. Blandin himself, during all the time of treatment, abstained from examining the state of the parts, for each time the mouth is opened the cover of the palate rises, and the movement which results might prevent the reunion of the parts thus brought together.

For five or six days the little patient received for nourishment only broth and milk, which he swallowed by spoonfuls, with coffee, these liquids being made to flow upon the tongue, the head being turned back, so as to cause them to pass into the stomach rather by their own weight than by a real movement of deglutition, which might have been injurious to the parts united by the operation.

All this care, admirably given and courageously seconded by the child, has been crowned with the best success. There remains nothing of the primitive division of the cover of the palate, which now presents an entirely normal conformation.

Already great modifications are observed in the functions of the part operated upon. The patient swallows his food with ease, which now seldom returns into the nasal fossæ. He can whistle, which was utterly impossible for him before the operation; his pronunciation, also, has greatly improved, though there is very much yet to be gained in this respect. In fact, consequent upon a defective natural formation, he had contracted the habit of misusing the vocal organs in the articulation of sounds. Now, the surgical operation which destroys the organic imperfection, destroys not, at once. the wrong habits which are the result of it; study and practice must change the unfortunate physiological direction which the organs of articulation have contracted.

ART. VII.—*History of Endemic Dysentery, as it prevailed at Lyons, N. Y., during the Summer and Autumn of* 1847. By DE WITT C. VAN SLYCK, M. D.

LYONS, October 25, 1847.

DR LEE,—*Dear Sir,*—Believing that a free exchange of opinion, concerning facts of daily occurrence in practice, is highly conducive to the general improvement of the medical profession, I have endeavored to compile, from my Note Book, a brief history of Endemic Dysentery, which prevailed in Lyons, N. Y., during the summer and autumn of 1847. This disease, aside from its fatality, presented several anomalous features which deserve to be chronicled.

During the spring and first summer months, the prevalence of bilious intermitting fever was unusually great, in comparison with former years, although meteorological observations, and other circumstances which were inquiringly consulted, did not appear to exhibit a corresponding change, or evidence of causation. About the first of July, this disease having partially subsided, the first cases of dysentery made their appearance. It was confined to malarious districts; not a single case occurred in upland sections, although but a mile or two distant from the infected localities. It assumed from the first a highly-malignant character, and its mortality has exceeded that of any disease which has pervaded this section of country since its early settlement.

The initial symptoms were remarkably uniform. A dull griping pain in the lower part of the abdomen, attended with slight gastric disturbance, for a few hours, and followed by violent tenesmus and mucosanguineous discharges, ushered in the disease. The discharges would sometimes consist entirely of mucus, streaked with blood; in other cases the blood would predominate. The frequency of the discharges varied generally from five to fifteen minutes, although the amount was inconsiderable, not more than one or two ounces, and without any appearance of natural fæces, and but slightly fœtid. During the progress of the disease, the discharges became more or less purulent and highly offensive. The tongue was covered with a thick white fur, with red edges, and a yellowish-brown, or dark stripe in the centre. Appetite slightly diminished, thirst considerable, though upon swallowing food or drinks a distressing tormina, tenesmus, and increased frequency of discharges would ensue. The pulse was uniformly lower and less frequent than in health; generally varying from 35 to 55 per minute. Urine scanty, high-colored, and frequently suppressed; skin dry and cold.

The most remarkable feature in the character of this disease, was *the entire absence of fever.* Most authors agree in asserting that it is always attended with some form of febrile disease, but, from careful observation in several hundred cases, I was unable to find a single instance where it was attended with febrile symptoms, and the observations of my medical brethren coincide with those already expressed. During the course of the malady, which usually runs from ten to fifteen days, it occasionally happened that the dysenteric symptoms would suddenly abate, and the patient would be attacked by a quotidian type of intermitting fever; and on the contrary, it would more frequently supervene upon a bilious remittent, or intermittent fever, in which case the febrile symptoms would immediately subside. Such cases, however, generally proved fatal.

At first the disease seemed to be confined to the large intestines, but as it advanced, it assumed an upward tendency: the pain and tenderness, which, in the onset, pervaded the hypogastric, gradually rose to the umbilical and epigastric regions; and in the course of a week, sore throat, and sometimes aphthous sore mouth, would make their appearance, which facts strongly intimate that the entire length of the mucous membrane of the alimentary canal was involved. Coldness of the extremities and alarming prostration occurred about the end of the first week, and unless promptly combatted with tonics and stimulants, would soon place the patient beyond the reach of remedial means.

The whole chylopoietic viscera seemed to be in a state of derangement. The liver was torpid, except in a few instances, in which the discharges were of a bilious character. Much tenderness existed over the region of the kidneys, and after the fourth day, dysuria was a prominent symptom. The urine became scanty, of a reddish-brown color, and sometimes entirely suppressed.

The sequelæ of this disease also present something novel in the train of dysenteric affections. In almost every case in which the urine was scanty, high-colored, and voided with difficulty, the patients, during convalescence, were attacked with acute rheumatism, with its usual symptoms, pain, stiffness, tenderness and swelling of the joints, and in a few instances of the most aggravated character, rendering mobility of the extremities almost impossible.

The plan of treatment at first adopted was found inadequate, and frequently injurious. In no case was venesection found to be admissible. Bleeding, either general or local, was followed by alarming prostration. Emetics, for the same reason, were seldom used. Cathartics, unless of a mild character, aggravated all the symptoms of the disease. Although the liver was morbidly inactive, yet the exhibition of calomel, and other forms of mercury, contrary to expectation, were productive of so much injury that its use was discontinued by general consent of the profession. Blue mass, in emulsion with gum Arabic and sugar, was less objectionable, and was prescribed when mercurials were indicated.

Opiates and astringents were the chief means of allaying the irritability, and arresting the progress of the disease. The quantity of opium borne by patients, was remarkable; many cases occurred in which more than a drachm of opium was administered daily, without producing its peculiar narcotic effects. When taken in such quantities, however, an eruption soon after appeared, of an exanthematous character, of a pale red color, and evenly spread over the whole surface of the body. When this made its appearance, the disease seemed to subside, and generally terminated favorably. Saccharum saturni, in combination with opium and camphor, was used with decided benefit, though generally the vegetable astringents were preferable, particularly the Hieracium pilosella, and Geranium maculatum. In conjunction with the foregoing, mucilaginous drinks, warm ablutions, and rubefacient applications to the abdomen, were employed with advantage.

Enemata of starch and laudanum throughout the whole course of the disease, were of immense advantage in diminishing the pain and irritability, and also the amount and frequency of the discharges. Diaphoretics and diuretics were used with much advantage.

The rheumatic affections which followed, were treated with nit. potash with Dover's powders, in large doses, as long as it could be borne by the patient. Perhaps the history of an individual case, will illustrate the treatment of this distressing affection, more fully than otherwise.

Aug. 18th, 1847. Called to see J. S——, whom I had attended through a severe and protracted course of dysentery; had been attacked the day previous with pain, stiffness, and swelling of the joints of the lower extremities; found him suffering acute pain in the joints, which were red, tender and considerably swollen; tongue red and glossy; pulse regular, but small, wiry, and frequent, 100 per minute; bowels regular; urine scanty, deep red color; skin dry and hot. Gave nit. potash and Dover's powders, in the proportion of 20 of the former to one of the latter, in scruple doses every two hours.

Aug. 19th. Little change. Appetite slightly increased, skin dry, pulse more active, no abatement of pain, joints continue to swell, no sleep. Continue nit. pot., in half drachm doses every two hours.

Aug. 20th. Appetite good, urine gradually increases in quantity, bowels move daily, dejections natural, skin slightly moist, pain and swelling of the joints much increased. Continue nit. pot., in half drachm doses every hour.

Aug. 21st. *Morning.* Found the patient suffering intensely, joints more swollen, no subsidence of pain, heat, and tenderness, pulse less frequent but strong, urine copious. One drachm nit. pot. with two grs. Dover's powders, every hour.

Evening. Called in great haste; found him vomiting, attended with severe spasmodic action of the stomach. Urine very copious and clear, perspires freely. Gave xxx. gtt. sol. morph., which allayed the retching and spasms. Omit nit. pot.

Aug. 22d. Has slept well, entirely free from pain, joints almost free from tenderness and swelling.

Aug. 26th. Is able to walk without inconvenience. In two weeks afterwards, felt no effects of rheumatism whatever.

Such is a brief history of a disease which has, in a given period, caused more mortality than any that has pervaded this section of country since its early settlement.

Art. VIII.—*Remarks on Strychnine.* By A. B. Case, M. D., of Howard, N. Y. (In a Letter to the Editor.)

Professor C. A. Lee—Dear Sir,—In answer to your note, permit me to briefly state, without comment, the following cases:

I saw a lady aged sixty. Three years before, she had had an attack of apoplexy, which left her with incomplete paraplegia, from which she gradually recovered, with the exception of paralysis of sensation of the arm and forearm; these she could move in any direction, but had no feeling in them. On one occasion, the forearm was burned so that a blister was formed as large as a dollar, and her attention was only directed to it by seeing her dress on fire. I attempted a cure with nux vomica with no beneficial effect, but by frequent shocks of electricity and friction with Croton oil, the feeling was re-established.

A robust man, aged thirty, had an attack of rheumatism of the knee; it was treated by bleeding, calomel, colchicum, blisters, &c. The swelling and pain were removed, but a complete paralysis of motion of the whole limb remained. By the use of nux vomica and dry friction, it recovered.

A lad, æt. sixteen, fractured his skull on the anterior and inferior portion of the right parietal bone, forcing a portion of it into the substance of the brain. On recovering from the primary effects of the injury, there was a paralysis of motion and sensation of the side of the face *corresponding with the fracture.* I paid but little attention to it, for a while, supposing that nature would complete the cure. After three or four weeks, I observed that there was no improvement, and that the transparency of the cornea was diminishing. I gave the nux vomica, which seemed to arouse the action of the motor nerves, but the opacity and obtuseness of feeling continued to increase. I next applied a blister to the temple and introduced some strychnia to the abraded surface, by which the motion was nearly restored, but without benefitting the opacity or feeling. Friction with Croton oil and galvano-magnetism was then resorted to, under the use of which, the feeling soon began to return, and the opacity to diminish, and in three weeks the feeling was nearly restored and the eye greatly improved. A complete cure followed.

A curious case of *local* paralysis agitans recently came under my observation. The patient was a young man, aged twenty-three, clerk in a country store. The first that he noticed it, was about six months before I saw him. At that time, according to his account, it was more like chorea than anything else. It was confined to the upper extremity of the left side. At the time of his application to me, the whole limb was in continued vibratory motion, every muscle appearing to participate more or less in the involuntary action. His general health was and had been good, had had no pain, neither could he assign any cause for its present condition. He could move it in various directions, and it was a little more sensitive to cold than the other. This case got well under the use of nux vomica and dry cupping on the cervical and dorsal regions. As these remedies were used simultaneously, I cannot decide on their relative value.

From these and other cases, I have come to the following "conclusions" relative to the remedial powers of strychnia and nux vomica; having usually used the latter article:

That although it acts with energy on the nervous system generally, it acts with most energy on the nerves of locomotion.

That when given in proper doses and under proper circumstances, it equalizes and increases nervous action, hence producing a tonic effect.

That a kind of tolerance to its use is soon produced, in most cases, and to avail ourselves of the greatest advantages in prescribing, the doses should be rapidly increased.

That this tolerance is most striking, and its beneficial effects more apparent and sooner produced, by beginning with small doses and repeating them frequently:

That its use should be confined to functional diseases:

That when given to debilitated and nervous patients, its good effects are greatly increased by combining it with *creosote*, that a combination of the two articles produces a much more happy effect than either given separately:

That in paralysis following apoplexy or other affections of the brain, it is judicious to anticipate its use or combine it with *hydr. potassa*, or some preparation of iodine.

ART. IX.—*Remarks on the Medicinal Properties of Witch-Hazel.* By JAMES FOUNTAIN, M. D., Peekskill, N. Y. (In a letter to the Editor.)

DR. LEE.—DEAR SIR,—In your very polite reply to my random and desultory remarks, among other things you ask the result of my experience in the use of the *Hamamelis Virginica*, especially in relation to its *narcotic property*, if it have any.

I have employed the Witch-Hazel for more than thirty years, in one way or another, as a remedial agent. My attention was first called to it by the country-people around me, who use it for all manner of hemorrhages. I once met a young man going to market in his wagon, and having by his side a branch of the witch-hazel in full foliage. I knew that his father and mother, and all the family, no less than eight or ten in number, except himself and a younger brother, had died of consumption. He, too, was pale and emaciated, and bade fair soon to follow them to the tomb.

He told me he dare not leave home without the witch-hazel, to stop his spitting blood, for as soon as this appeared he chewed some leaves and swallowed the juice, with the invariable effect of arresting it at once. He has ever since continued to use the leaves, or a decoction of the bark. Either of these, arrest the hemorrhage and relieve the pains of the chest promptly. He has since lived many years, although his health is not good. But I presume he owes his life to this one article. This is only one of the many similar cases of its successful effects.

As the shrub grows abundantly everywhere, I often direct the poor to the use of it for various purposes, where astringents and anodynes are required. It does not arrest diarrhœas, or any morbid secretions, so remarkably as moderate hemorrhages, especially those of the lungs, stomach, and intestines. In hematemeses I have found it to operate like a charm. It appears to be especially adapted to young and irritable subjects.

As to its anodyne proper'y, I told Dr. Peixotto, formerly an editor of the New-York Journal of Medicine, etc., many years ago, that I was convinced it possessed such a principle decidedly. Since then, I have consulted every author accessible to me, but I find no notice of such a property, except by Professor Rafinesque, and by the United States Dispensatory. They speak of its "*sedative*" property. By which I presume they really mean narcotic after all.

I was led to this conclusion from its relieving pain in cases of hemoptyses. By allaying or diminishing irritability, it lessens the tendency to this disease as well as to hematemesis, and thus lays the foundation for a permanent cure. A few years ago, a poor woman brought a pale, emaciated girl of some five or six years old, to the door, and asked my son what she should do to stop her from vomiting up blood, which she did daily? He replied, let her have a tea of witch-hazel bark freely and daily. In a few months, she was a fine healthy and robust girl.

It is in cases of piles, however, that its anodyne property is more manifest. Our Dispensatory says, "it is used in the shape of a poultice, or as a wash in the form of decoction in hemorrhoidal affections, etc." But my experience goes some farther than this, for the sudden and decided relief it affords to the pain and soreness of the piles.

Please to excuse me for giving you the history of my own experience in this troublesome disease. It may, at any rate, afford you a little amusement. You remember Dr. Rush said, "as bees gather honey from the humblest flowers, so we must listen to the tale of experience, though told by an old woman."

In the early years of my practice, I followed my books, and prescribed internally Cream of Tartar and Sulphur, and externally I used the Nut-gall Ointment. I was soon told, however, that as an external application, the ointment of the D. stramonium was preferable. And I found it so. When properly made, it affords prompt relief in subduing the soreness and pain. But by experience, I learned that it performed a cure sooner by adding to it finely-pulverized Nut-galls, thus making it anodyne and astringent. This was my standard application for many years, and I was satisfied it was good enough.

About ten years ago, or so, however, a new ointment from the East, somewhere in the neighborhood of Danbury, in Connecticut, was peddled about the country, and acquired great fame as an infallible cure for the piles. And, in truth, it did succeed admirably. Its effects, as an external application, were sometimes truly surprising. Accidentally the recipe for its make fell into my hands, and here it is.

℞. White-Hazel bark. White Oak bark, the inner part. Sweet Apple tree bark, of each three handfuls. Water, three quarts. Boil down to one pint—strain; add lard half a pound, simmer out the water, stirring it continually, before and after removing it from the fire, till it cools. It forms a brick-colored, anodyne, astringent ointment—admirably adapted to the cure of hemorrhoidal tumors.

Permit me to say, that for internal piles, or those within the rectum, when a syringe tube can be introduced, I find an injection of lamp oil affords remarkable relief.

I recently made a striking cure of a man greatly exsanguined, emaciated, and weak, from the bleeding of piles within the rectum, by administering a teaspoonful three times a-day, of equal parts of Bals. cop. and Tinct. Mur. Ferri.

Dr. Sewall, or some one else, a few years ago, recommended aloes for the piles. Thus, ℞. *Aloes soc.*, *Aniseed*, aa ℥ i. *French brandy*, a pint—digest, etc. Dose sufficient to keep the bowels free. This has been for years my constant remedy, and it operates most admirably. A teaspoonful a-day is often enough—but more is generally required.

ART. X.—*An Account of a Disease peculiar to the Workmen in Brass-cock Foundries.* By AUGUSTUS KINSLEY GARDNER, M. D., Fellow of the N. Y. Academy of Medicine, Physician to the N. Y. Dispensary, etc., etc.

THE introduction of Croton water into the city has brought with it not only its peculiar artisans, but also its peculiar diseases. The general use of this water has made a great demand for the brass cocks and faucets used in drawing it. To meet this call, a company in this city, some two or three years since, sent an agent to Manchester to obtain workmen able to follow this occupation. Twenty men and their families came out, most of them young and vigorous, few numbering more than thirty years. It is of a disease peculiar to them that I have now a few words to say.

Shortly after their arrival here, I was called to treat several of them with various ailments, either produced by a long voyage, or from improper food and exposure after landing and during the period of acclimation. They proceeded to commence their labors. In the course of a few weeks I was called upon by Mr. W., a man of family, and, as I have since learned, of exemplary character. He complained of great pain in his bladder and kidneys, and had at the time a yellowish discharge from the urethra. Supposing it to be simple gonorrhœa, although he denied the fact, I prescribed accordingly. The medicine acted freely upon the bowels, and in a few days he was quite well. Some six months after he had another similar attack of what he styled "the gravel," but without the urethral discharge. A succession of laxatives, Pulv. rhei et sodæ, soon relieved him.

After a few days had passed, Mr. R., living with Mr. W., was also seized with "the gravel;" which troubles, an aperient with Spts. nitr. æth., easily removed. I had several other similar affections from different workmen about that period.

During the past August, Mr. R., residing in Brooklyn, came to my office with similar complaints. He had been unwell some days and had taken several doses of Castor oil, which had operated well, but the pain in his bladder still continued, accompanied with difficulty in passing his urine. I ordered him to take of Pulv. rhei et sod., laxative doses, and a tea-spoonful every four hours of the following:

℞ Miscil. Acaciæ, . . ℥ ij.
Tinct. Cubebæ,
Spts. Nit. Æth. . . āā ℥ ss.
Tinct. Cantharid. . . ʒ j.—M.

The next afternoon, (Sunday,) he sent for me. Pain much increased in the bladder and it had extended to the kidneys. Had had one or more alvine discharges. Some dysuria. Pulse good, 78. Tongue coated and dry. Teeth having a dark line around near the gum, which he said was common with brass workers. I ordered a drachm of Sol. sulph. morph every hour till the pain was quieted.

Monday. Pain not relieved, had taken three grains of Sulph. morph. No action of the bowels. Tongue and pulse unchanged. Abdomen tumefied, soft, tender on pressure. Somewhat tympanitic. Great sensitiveness in the region of the kidneys. No appetite; drinks, etc., rejected. Frequent calls to urinate, with but little ability.

℞ Hyd. Submur., . . grs. xij.
Pulv. Jalap, . . " xv.—M.

Continue Sol. morph. if the pain continues severe. Inf. buchu ℥ ij. ter in die.

Tuesday. No better. The calomel and jalap not operating, he had repeated it without effect. Pain continues excessive, unrelieved by Morphiæ. Dysuria continues, but less than yesterday. ℞ Sennæ and salts. Fomentations of hops to abdomen. Enemata.

Wednesday. No operation of bowels and little change from yesterday. Enemata returned without effect. Patient imagined he had a calculus in the bladder, as he had passed one some years previously, and thought that the pains in the bladder were similar. Pains in kidney much mitigated. Passed a silver catheter, no calculus discernible. Had slept some, the fomentations giving much relief.

℞ Ol. Ricini, . . ℥ j.
Ol. Tiglii, . . gtt. j.—M.

To be repeated in four hours if there be no operation.

Thursday. Much easier. Had a free motion of the bowels after repeating the Ol. Tiglii. Dysuria continues, though lessened. Tenderness of the abdomen vanished. Is slightly salivated. From this day the patient recovered rapidly, and on Monday partially resumed his labors.

The treatment of this case in administering Tinct. Cantharid., though in small doses, was unquestionably wrong, although the original symptoms, perhaps, justified it. The disease finally had the appearance of colica pictonum modified. The use of opium has the support of the great body of practitioners, as also does the exhibition of calomel, yet the former produced no sensible diminution of pain, and the latter no visible action except in producing salivation.

A brother of the above, Mr. R., employed in the same business, has had a similar attack, and was treated by a physician for inflammation of the bowels. He has now partial paralysis of both hands.

Sept. 10. Was called to Mr. J. W., who some six weeks since had a slight attack of sickness, some febrile symptoms and constipation, which slight purgations easily removed. Had not felt well since—had little appetite, and complained of weakness. Had, on that account, left the establishment in which he had worked, and gone to another where the work was lighter, but where the brass was of poorer quality, *i. e.* contained more lead. He had been but a few days in this shop when he was taken ill. and took some "bilious pills," which operated freely during afternoon and night. The next morning at eight o'clock, when I saw him, he said he was no better, complained of pain in abdomen. Pulse 70, soft, skin cool, tongue partially covered with thin white coat. Teeth and gums similar to those of all in the business. ℞ Pil. Opii, No. 1, quaque hora 2nda.

5½ *p. m.* Having taken these pills at regular intervals without relief, he had taken two together about an hour before I came; was much worse than in the morning, rolling and tossing upon the bed. I gave him, immediately, three of the pills, and waited an hour, during which time he had no ease. The opium seemed not to have the least effect. Ordered sinapisms to the abdomen, and

℞ Ext. Conii, . ʒ ss.
Ol. Tiglii, . gtt. xij.
Magnesia, . q. s.—M. ft. pil. No. xij.

He took half of one, and in a half hour the remaining half. I ordered him to take one every four hours till operation.

12½ *a. m., Sept.* 11. Had taken two more pills, pain increased, patient seemed frantic, sinapism had vesicated. Continue pills one every three hours. Fomentations of hops to abdomen, applied as hot as possible. Enemata.

6½ *a. m.* Had taken two more pills without operation. Had some vomiting. Fomentations gave some little relief. Enemata have come away unchanged. Continue fomentations, pills every two hours, and asafœtida enemata, with castor oil and turpentine.

3 *p. m.* Has taken all the pills, no operation, no relief. Had slept a little. I had taken with me a vial of Ol. Tiglii, which from previous use I knew to be good. In an ounce of castor oil I gave gtt. vj. at one dose.

6 *p. m.* No change. At the desire of his wife, I requested Dr. W. N. Blakeman to accompany me. Pulse 78, soft. At his instance, for the purpose of relaxing the system, Pulv. ipec. was exhibited—grs. x. every half hour. Large and stimulating enemata. Hip bath.

11 *p. m.* Had two small passages of the bowels, of a soft character, but with no relief from pain, except temporarily while in the bath, which he had taken twice. Ordered Ol. Tiglii, gtt. ij., to be taken at one p. m., if the pain be not abated. Continue fomentations.

Sept. 12*th*, 6½ *a. m.*—Had two small stools since last visit; slept some; pain but little less.

℞ Alumina, ʒ j.
Camphoræ, ℈ ij.—M. ft. chart. vj. una quaque hora 2nda.

2 *p. m.* Pains somewhat easier after each powder, but unmitigated when the immediate effect is passed. Continue. As the patient was unaccustomed to the use of tobacco, advised smoking, to be arrested with nausea and recommenced after that has passed by.

8 *p. m.* The tobacco had caused considerable nausea, but had not in the least relieved the pain, which continued unabated. Gave 30 drops of Majendie's sol. sulph. morph., which entirely quieted all pain and produced some sleep. At 9 p. m., Dr. Sweney was called in, who approved of past treatment and advised continuance of Ol. Tiglii. This was done as follows:

℞ Ol. Tiglii, gtt. xij.
Mass. Hydrarg. ʒ j.—M. ft. pil. No. xij. unam quaque hora quarta.

And every intermediate second hour ℥ ss. equal parts castor oil and turpentine.

Sept. 13, 8 *a. m.* Had no renewal of pain; small passage from bowels; continued from this time mending.

Those cases are but brief reports of the symptoms which characterized the diseases of these workmen. It is a matter of some doubt what is the cause. The "composition" in which they work contains at the most but 4 lbs. of lead to 50 lbs. of the other ingredients, copper, spelter or zinc, sometimes antimony and bismuth. The workmen have an idea that "old rusty metal" is more unhealthy than the pure ore. The workshops are—especially Metcalf's, in Centre street—spacious and freely ærated, having an abundant supply of Croton water, soap, etc. The workmen need, necessarily, handle the blocks of metal but very little. instruments being provided for the purpose. Notwithstanding this, the fragments of metal thrown off while turning, do enter their hair, though the head is covered with a cap, and their clothes, dyeing them all with a greenish tint. Their shirts, when washed, color the water with the same hue.

The appearance of these workmen is remarkable. Though some of them have worked forty years in the same business, and in England, where a much poorer metal is used, *i. e.* containing more lead—without ever being rendered ill, they all have a peculiar unhealthy countenance. Their skin is sallow and wrinkled; perhaps they may be muscular, but rarely with much adipose matter—looking prematurely old, in that particular having a marked contrast to their buxom, hearty wives. Their children, too, seem vigorous and healthy.

Much might probably be done as a preventive to this disease, so similar to colica pictonum in its symptoms. Mr. Metcalf is in the habit of taking himself, and recommending to his workmen, a tablespoonful of sweet oil every morning. Frequent change of body-linen would undoubtedly be beneficial. The workmen are accustomed to wash frequently, yet this, perhaps, may be carried to such an extent as to be injurious. I conceive that washing the hands and returning immediately to work would be deleterious, as the danger of an absorption of the injurious particles of metal would be far greater than with a dry hand, though coated with the dust.

The object of this article is not to throw any light upon the treatment of this complaint, but merely to make its existence known, that it may not be confounded with enteritis or any similar malady.

Art. XI.—*Two Cases, with Remarks.* By Moses Gunn, M. D., of Annarbor, Michigan.

The following are the notes of two cases, which were to me extremely interesting, and which seemed not devoid of novelty. The first I look upon as essentially Epidemic Erysipelas advancing to a suppurative stage, and differing only from the ordinary cases of that disease, in the part attacked:—the face. Scalp and fauces being the usual seats of this malady. With regard to the treatment of this complaint, I agree with my friend Dr. Griscom, as he expressed himself in the July No. of your journal: that the stimulating and diaphoretic treatment is the most effectual, particularly as we are seldom called in the early stages of the disease. With regard to local stimulating applications, I must differ from his experience. If where he says, "that they seem to do no good," he means that they fail to arrest and cut short the course of the Erysipelatous phlegmon, there I agree with him, for I have never applied them to answer such an indication. I have looked upon the disease as one that must run its course, and have feared its recession; hence stimulating applications have been combined with the general remedies to prevent such an event, and to hasten the disease through a natural course.

For the other case I have no name, unless it be Milk *Arm.* Of the early history of the case I can learn nothing very definite, except the confinement and subsequent swelling of the arm. Whether the latter phenomenon was the consequence of the recession of the mammary secretion, or the mere coincidence of an idiopathic inflammation of the fascia of the arm, I am at a loss to determine. There was a scrofulous taint in the family, and whatever was the original nature of the disease, it subsequently assumed a scrofulous character, and, it will be perceived, yielded to the class of remedies usually directed in such cases.

CASE I. On Wednesday, April 7, 1847, I was called to see Mrs. I. K. the patient of another practitioner, who on account of business in an opposite direction, was unable to attend to the call. The patient had been confined with her first child four weeks previously, and had given birth to a fine healthy child. She was recovering, but slowly, though her physician had not seen her for several days, when the messenger brought word that she was much worse, and that her arm was swelling rapidly. I immediately visited the patient, and found her much emaciated from previous confinement, and suffering from intense pain in her left arm, which was badly swollen from the shoulder to the tips of the fingers, and of a uniform erysipelatous redness—pulse hard and 130—tongue covered with a thick brown coat, the existence of which in certain cases of the disease has given rise to the popular name of "Black tongue." On inquiry, I found that the father of the patient was just recovering from the latter disease, and that he had lain during his sickness in the same room which she had occupied. This left no room in my mind for doubt as to the nature of the complaint. Her bowels having been moved, I put her upon the use of the following—

℞. P. Doveri,
Potass. Nitr. aa grs. xxiv.
M. ft. pulv. No. viij.
One powder to be taken every two hours.

Being several miles from town, and having neither Corrosive Sublimate, Nit. Silver, or other stimulating applications, I directed the frequent application of hot spirits of turpentine over the whole surface of the arm. The case, with its treatment, was reported to the attending physician, and I heard nothing further from it except that relief was experienced from the terebinthinate application, and that the case was running the usual course—swelling subsiding and cuticle desquamating—until Apl. 25th, when I was requested to take charge of the patient. I now found her in an extremely low state, and had I not known the previous history of the disease, I should have pronounced it a case of suppurative inflammatory rheumatism of the deep fascia. The arm had opened on its inner aspect, and was discharging healthy pus. The forearm was distended from the elbow to the fingers by a collection of matter beneath the enveloping fascia of the muscles. Fluctuation was distinct at any point, but extremely so at the back of the hand; she was suffering from night-sweats and wakefulness—pulse 135—small and feeble. I introduced a lancet into the back of the hand, and evacuated several ounces of laudable pus, directed a poultice to the wound, placed the hand in a position to facilitate the escape of matter from the forearm through the wound in the hand, and put her upon the use of the following diaphoretic solution of Quinine:

R. Spts. Mindere i.
" Æther. N. aa ℥ij.
Sulph. Quinine. grs. xxxij.
Ft. solutio.—A teaspoonful every four hours.

Directing the breasts to be frequently drawn, I left the patient.

27th. Patient appears rather better—pulse 130—forearm considerably lessened in size, and both openings are discharging laudable pus. Continue remedies, keeping bowels open with mild aperients.

29th. The forearm has resumed its natural size—slight discharge from the lower wound—a slight swelling appears in the lower part of the gastrocnemius—pulse 130. Continue remedies.

May 2d. Less discharge from openings of arm and forearm—increase of swelling in the gastrocnemius with contraction of the tendo-achillis—pulse 120. Continue remedies, with the free application of the volatile liniment to the swelling of the leg.

5th. No discharge from the forearm—less from arm—increase of swelling on leg—pulse 114. Continue remedies, laying a blister over the swelling of leg.

8th. Patient better in every respect—I directed her to exercise the limbs carefully, and gradually to discontinue the medicines.

24th. I again saw the patient, and found her nursing her child. There is still slight contraction of the gastrocnemius, but it is gradually yielding. Adhesion between the tendons of the extensors of the fingers and their sheaths has taken place, preventing the perfect closure of the hand. There is also a contraction of the fascia at the bend of the elbow, preventing the perfect extension of the forearm.

Since the above date, the patient has recovered entirely the use of the foot, and is gaining gradually the free motion of forearm and hand.

Case II. On the 2d of February, 1847, as I was passing a house in the country, I was requested to call and see a "bad arm." The patient was a female twenty-three years of age, and the mother of three children. On examining the arm, I found it in a situation closely resembling that of the preceding case, at the time I took charge of it—the fascia of the forearm distended with a fluid, and an opening at the middle of the arm which was discharging a tolerably healthy pus. I learned that she had given birth, about six weeks previous, to a child between the seventh and eighth months, and that the swelling of the arm had supervened on the confinement. She was now much emaciated, and apparently very low, pulse feeble and rapid. She had been attended by a quack, (one of the Genus Uriscopia,) and learning that she was still in his care, I declined expressing an opinion of the case. Meeting however the quack in the street, *humanity* prompted me to give him a hint of the nature of the case, and I directed him to open the arm, and put her upon the use of tonics. I afterwards learned that the next day he evacuated from the arm a half pint of matter, after which learned no more of the case until May 4th, when I was sent for to visit another patient in the same family. I was now again requested to examine the arm, and prescribe for the patient, as she had been abandoned by her quack attendant as incurable. I now found her still more emaciated, with a pulse of 136, and feeble. Her bowels were irregular, she was suffering from colliquative sweats. The forearm had resumed its natural size, but the shoulder was enormously swollen. The motion of the joint was entirely lost, and the swelling, which completely obscured the anatomical relations of the parts, was unusually dense. In tracing up the humerus, it appeared to enlarge from about the middle of the bone. There were two openings, which the subsequent disappearance of the swelling showed to be one above and one below the acromial extremity of the clavicle; from these there was discharging a moderate amount of healthy matter. Pushing my inquiries, I learned that scrofula was hereditary in the family. This array of symptoms and circumstances—the protraction of the disease—the immense swelling which seemed to blend all the tissues—the great debility—and the almost constant pain, which threatened to exhaust the little remaining strength of the patient, led me to hope for nothing, and to fear the worst. Giving her the miserable consolation, that "while there was life there was hope," I put her upon a mild but generous diet, regulated her bowels with mild aperients, and ordered the following—

R. Ext. Sarsaparilla, f℥ viij.
Potassii. Iodid. ʒj.
Ft. Solutio—one half ounce to be taken three times daily.

R. Quini. Sulph. grs. xxiv.
Mucilag. G. Arabic. q. s. ut ft. mass.
divid. in pill. no. xxiv.
One pill three times daily with the Sarsaparilla.

R. Lupuli communis.
Farinæ Sem. Hordie. aa partes equales.
Aqua q. s. ut ft. Cataplasm.
To be applied to the whole shoulder at night.

R. Iodini. Tinct. q. s.
To be applied to the shoulder with a camel's hair pencil every morning.

After persisting in the use of this formidable array of remedies for four weeks, without making any impression upon the disease, except an alleviation of the pain by the sedative effect of the hop poultices, I felt like abandoning the case; but hope bade me look for what another week might shadow forth. At the end of this time, she was evidently improved, and although as yet, only slight alteration could be perceived in the physical appearance of the diseased part, the improved state of her pulse (110)—the alleviation of the pain, and the increase of strength, awakened, in her own mind, as well as mine, a confidence in the remedies, which undoubtedly contributed, not a little, to their after good effects. I continued to visit her, and directed her to take the air daily when the weather was suitable.

June 29th. I made the following notes.—Shoulder much reduced in size, enabling me to trace distinctly the spine of the scapula and the clavicle through their whole length—slight motion of the joint—fistulous opening above the clavicle healed, and only slight discharge from that below—pulse 96. I directed her to discontinue gradually the use of Quinine pills.

July 9th. I found her walking in the garden—the remaining fistula healed.

July 28th. Patient visited me at my office, having ridden eight miles to do so.—Since my last visit to her she has ridden six miles on horseback, managing the horse chiefly with the sound arm.—Shoulder perfectly natural in appearance, though the humerus seems somewhat larger at its upper extremity than that of the opposite side.—Motion of the joint yet limited, though improving. She is quite fleshy, and seems in perfect health, though her menses have not returned.

Sep. 1st. Shoulder perfectly natural. Joint admits of extended passive motion, but voluntary motion quite limited.—Menses have returned, and health seems perfectly established.

Art. XII.—*Injury of Brain, with Chronic Abscess and Softening.* By Chas. C. P. Clark, M. D., of Middlebury, Vt.

August 27th, 1847. I was requested to visit J. E., æt. 17. On arrival, I learned that seven days before he had been struck in the left eye by the horn of an ox. The eye was dislocated, and lay partially attached, on the outer edge of the orbit. The sides of the wound were already adherent, so that the determination of its depth and precise limits was deemed at that time impossible, or at least unadvisable. I learned, however, from the surgeon who had first seen him, that on exploring the wound with his finger, he was satisfied that the wall of the orbit was broken through. When found, perhaps half an hour after the injury, the boy was sitting on a stone and possessed of his reason and senses, though somewhat confused. He gave an intelligible account of the manner of the accident nor had his nervous system given any evidence of derangement, other than I shall presently mention, up to the time of my visit. The pulse, when he was first seen, a few hours after the injury, was almost imperceptible, very slow and irregular; the extremities cold, the condition of the sound eye I could not learn. He complained much of headache, sometimes shrieking out with the violence of the pain, and was often affected with opisthotonic spasm.

When I saw him, seven days after the reception of the injury, he was in the following condition: pulse 52 and feeble, but regular. Pupil somewhat dilated and sluggish. No intolerance of light or sound; all the senses, in short, healthy. At irregular intervals he had headache and opisthotonic spasm, but these had been, from the time of the accident, growing less frequent and severe, and they continued steadily to diminish. The scalp was *perhaps slightly* warmer on the side affected than on the opposite side; and I thought I detected some confusion and sluggishness of mind, though he was rational. The treatment was that ordinarily pursued in such cases, though general bleeding, seeming to be contra-indicated, was not employed. All the symptoms steadily improved; in the course of a month the eye sloughed out, the wound healed, and the young man apparently regained his usual health, with the exception that he occasionally suffered from headache. I was asked, about six weeks after the injury, to see him in a severe attack of this sort. The pain seemed, for the most part, to follow the course of the supra-orbital nerve of the injured side, and was accompanied with symptoms of gastric derangement. It readily yielded to an emetic, antacids and laxatives, from which I was disposed to regard it as neuralgic. In the latter part of October, I saw him on his way to his parents, who lived at some distance. He said he felt well, only that he occasionally had headache, but he did not know that it was different from what he had had before he was hurt. He seemed well, in mind and body, except that in conversation with him his memory and attention appeared less perfect than ordinary. The deficiency, however, being slight, might, I thought, be natural. On the same day, he had what, from the description, I judged to be an epileptic fit, while warming himself by the fire, and subsequently was confined four weeks by what his physician called typhus fever. After that, he suffered more than before from headache, principally in the back part of the head, which was relieved for a time by aloetic pills.

About the middle of January, 1848, I saw him again. At this time there was a marked deficiency in his mental faculties. His memory and attention, particularly his memory of names, were much impaired. He was unable to read, though, as he said, he formerly read well. The nature of the difficulty he had in reading he could not describe intelligibly; common objects he saw pretty well.

His physical powers, too, seemed weak, his breathing being much hurried on ascending a flight of stairs. Both the mental disturbance and the physical debility I thought might possibly be the effect of the attack of fever, though the probability certainly was, that disorganization was going on within the brain.

January 22d, in the afternoon, I was called to see him. I found him on the bed, stupid, though easily roused, and delirious, alternately; complaining at intervals of excruciating pain in the left side of the head, most posteriorly. Every few minutes there was opisthotonic spasm, particularly of the cervical muscles, not very severe. The pupil of the remaining eye dilated and insensible to light, but exhibiting slight and rare spontaneous movements. The voluntary muscles were under his control, except in the paroxysms of spasm, as were also the sphincters. Neither was there sensational paralysis. Irritation of the integuments of the left side of the head caused severe pain. The pulse was about 60, very feeble and very irregular. The tongue was coated, and the breath foul. The face was slightly flushed, but hardly warmer than natural. The surface, generally, of a natural feel, but the hands cold. The delirium was not so wild as that he was not easily controlled, though he sometimes attempted to get out of bed. I learned that he had gone into this state about twenty-four hours before. For two or three days previously, he had complained much of the time of excruciating pain in the head, and had been occasionally affected with tremors, but without the sensation of cold. For a week or more, his mental powers had been rapidly failing. He frequently said that "he did not know anything and never should;" that "he had forgotten all he ever knew," &c. &c. Seeing the imminency of death, I did little for him, and he died comatose, with little previous change in his condition, the same night at twelve o'clock

Post-mortem inspection, sixteen hours after death. Scalp, bones of the cranium and membranes of the brain healthy, except as after mentioned; veins and sinuses of the brain turgid with blood. The brain was plainly swollen or fuller than natural, for on cutting the dura mater it bulged out through the opening. On removing the brain, it was found that there were dense, organized adhesions between the membranes, the bone and the brain, with thickening of the membranes, at the posterior wall of the orbit of the injured eye. Two fragments of bone, fractured pieces of the posterior wall of the orbit, lay in contact with the dura mater, adherent to it, and one of them penetrating it and the pia mater. One of them was from the orbital plate of the frontal bone, the other, of the sphenoid. The area of both was perhaps one half a square inch. As the brain was removed, a drop of pus was seen lying at the point of the penetrating fragment, updn the dura mater, and from a corresponding wound in the arachnoid, pia mater, and substance of the brain, pus was seen to issue. On cutting into this part, the middle cerebral lobe of the left side, near its base, an abscess was opened, lined with thick and tough pyogenic membrane, and giving exit to one and a half ounces of white, stinking pus. The abscess did not extend into the lateral ventricle, nor in any direction beyond the lower half of the middle lobe. Above it, and around it, to a depth varying from half an inch to an inch, the cerebral mass was much softened, in parts semifluid, and of a reddish hue, and the redness extended beyond the softening. Otherwise the brain was healthy. The date of the patient's death was five months and two days from the time of the injury.

PART SECOND.

Critical Analysis.

Art. XIII.—*An Inquiry into the Influence of Physical Causes upon the Moral Faculty.* By B. Rush, M. D. An Address delivered before the Am. Phil. Society, Feb. 27, 1786.

It has often occurred to us, that the Physicians of our times do not pay sufficient attention to the influence of physical causes upon the moral faculties; while it is admitted, that mind and its manifestations are essentially involved with our organization, there being a constant and reciprocal influence maintained between them. It is not sufficiently considered, that the feelings and the moral faculties are no less powerfully controlled by causes affecting the physical organization, and that character itself often receives a bias, from influences not altogether within the control of the individual. That an intimate relation exists between our mental and corporeal natures has always been admitted; but while we have endeavored to understand how intellect and passion cause morbid derangements of the bodily functions, and thus lead to bodily disease, we have lost sight of the converse influence of corporeal states upon the *moral*, as well as *intellectual* faculties. It is a well-known fact that *St. Vitus's Dance* was not made a subject of medical research until the beginning of the 16th century; until which time it was admitted to be a demoniacal affection. It was Paracelsus who first undertook to withdraw diseases from the pale of miraculous interpositions and saintly influences, and explain their causes upon principles deduced from a knowledge of the human frame. At this period, a belief in enchantment, and in the power of the saints to inflict diseases, was universal; hence the reason why certain maladies were named after them, as St. Anthony, St. Vitus, etc. From that day to the present, it has been considered the province of the physician to investigate the nature of all abnormal manifestations, whether of body or mind; and while it is left to the theologian to expand and illustrate the precepts of the divine law, it belongs to us to expound the equally sublime laws of man's physical organization, and trace, as far as our humble faculties will permit, that mysterious and reciprocal influence between the mind and the body, which is equally seen in the frequent deranged action of both.

To our countryman, Dr. Rush, belongs the credit of first attempting to point out the influence of physical causes upon the moral faculty, meaning by this, "a capacity of distinguishing and choosing good and evil, or in other words, virtue and vice."

Dr. Rush considered "virtue and vice to consist in action, and not in opinion, and that this action had its seat in the will and not in the conscience;" hence he confined his inquiries chiefly to the influence of physical causes upon that moral power of the mind connected with volition, although he maintained that many of these causes act likewise upon the conscience. "The state of the moral faculty," says he, "is visible in actions, which affect the well-being of society. The state of the conscience is invisible, and therefore, removed beyond our investigation." In this able discourse, which has received far less attention than it deserves, Dr. R. first points out the effects of physical causes upon the memory, the imagination, and the judgment, and the analogy between their operation upon the intellectual faculties and the moral faculty, and he then proceeds, in a most masterly manner, to show how the same causes influence the moral faculties. "It is immaterial," he remarks, "whether they act through the medium of the senses, the passions, the memory, or the imagination. Their influence is equally certain, whether they act as remote, predisposing, or occasional causes.

The first cause which Dr. Rush mentions, is *Climate*, whose influence in modifying human character, and feelings, and conduct, as manifested in nations, and in individuals, is too manifest to need an array of facts to support it. The influence of season and the weather, is no less striking and important.

"The effects of *diet*," says Dr. R., "upon the moral faculty, are more certain, though less attended to, than the effects of climate. "Fulness of bread," we are told, was one of the predisposing causes of the vices of the cities of the plain. The *fasts* so often inculcated among the Jews were intended to lessen the incentives to vice; for pride, cruelty, and sensuality, are as much the natural consequences of luxury, as apoplexies and palsies." Dr. R. then proceeds to point out how the *quality* as well as the *quantity* of aliment has an influence upon morals, and how especially, the moral faculty is perverted by the use of *alcoholic drinks*. It is unnecessary to quote facts in proof of this position, as every one is aware of their temporary, as well as permanent influence, in debasing the character, and kindling every latent spark of vice into action. "Water," says Dr. Rush, "is the universal sedative of turbulent passions; it not only promotes a general equanimity of temper, but it composes anger." The next cause mentioned is *extreme hunger*, "which," says Dr. R., "produces the most unfriendly effects upon moral sensibility. It is immaterial, whether it act by inducing a relaxation of the solids, or an acrimony of the fluids, or by the combined operations of both those physical causes. The Indians in this country, whet their appetites for that savage species of war which is peculiar to them, by the stimulus of hunger; and hence we are told they always return meagre and emaciated from their military excursions." Cardinal De Retz acted upon a knowledge of this fact, when he suggested to politicians, never to risk a motion in a popular assembly, immediately before dinner. "One of the worthiest men," says Dr. Rush, "I ever knew, who made his breakfast his principal meal, was peevjsh and disagreeable to his friends and family, from the time he left his bed till he sat down to his morning repast, after which, cheerfulness sparkled in his countenance, and he became the delight of all around him." Dr. Rush then proceeds to point out how *bodily diseases* derange the moral sentiments, feelings, and character; in some instances leading to moral insanity, in which the intellect escapes unharmed, but the moral faculty is entirely perverted. "Not only madness," says Dr. R., "but *hysteria* and hypochondriasis, as well as those states of the body, whether idiopathic or symptomatic, which are accompanied with preternatural *irritability, sensibility,* or *mobility* of the nervous system, dispose to vice, either of the body or of the mind. It is in vain to attack these vices with lectures upon morality. They are only to be cured by medicine, particularly by exercise, the cold bath, and by a cold or warm atmosphere." The other causes mentioned by our countryman, as influencing the moral faculty, are *idleness, labor, excessive sleep, bodily pain, cleanliness, solitude, silence, music, pulpit eloquence, odors, light and darkness, different gases, medicines, imitation, habit and association, cruelty to animals, public punishments,* etc. These are all dwelt upon, and their effects illustrated by a great number of facts and cases, which cannot but convince the most sceptical. "Hitherto," says Dr. Rush, "the cultivation of the moral faculty has been the business of parents, schoolmasters, and divines. But if the principles we have laid down be just, the improvement and extension of this principle should be equally the business of the legislator, the natural philosopher, and the physician; and a physical regimen should as necessarily accompany a moral precept, as directions with respect to the air, exercise and diet, generally accompany prescriptions for the consumption, and the gout."

But of all the affections produced by physical causes, or the belief of a physical cause, *Tarantism,* or the *dancing mania* of the middle ages, was one of the most remarkable. "The persuasion of the inevitable consequences of being bitten by the *tarantula,*" says Hecker, "exercised a dominion over men's minds which even the healthiest and strongest could not shake off." It seems that after being bitten by the spider called *tarantula* in Italy, there was, according to popular opinion, no way of saving life except by music; hence, a lively tune, well adapted for dancing, called *tarantella,* was invented for this purpose, and bands of musicians perambulated the country during the summer months, "undertaking," says Hecker, "the cure of the *tarantati* on a grand scale." The symptoms consequent on the bite of the tarantula, were a peculiar melancholy, bordering on stupefaction, attended with a great sensibility to music; some wept constantly, and, as if pining away with some unsatisfied desire, spent their days in the greatest misery and anxiety. (Hecker.) So generally prevalent was this morbid state of mind, that it needed only a stimulus in the bite of a tarantula, to originate this violent nervous disorder; and when once seized with it, there was no effectual cure but dancing to the influence of the *tarantella.* "Even the clergy," says Hecker, "who wished to shut their ears against music, because they considered dancing derogatory to their station, fell into a dangerous state of illness, by thus delaying the crisis of the malady, and were obliged, at last, to save themselves from a miserable death by submitting to the unwelcome, but sole means of cure."

Hecker also relates an instance of a nun in a certain convent in France, who began to mew like a cat, and shortly all the nuns commenced mewing in a similar manner, which they kept up every day for several hours together. This cat-concert was only broken up by placing a company of soldiers before the door of the convent, with directions to whip the nuns until they stopped mewing, which they speedily did. Zimmerman tells of a nun in a German convent who fell to biting all her companions, and in a short time all the nuns began biting one another; the news of this infatuation spread throughout the convents of Germany, and the biting propensity raged wherever the news spread, till it finally reached Rome. In 1805, an epidemic chorea, or St. Vitus's Dance, caused by religious enthusiasm, prevailed among the people of Kentucky and Tennessee, attended with violent convulsions, laughing, shouting, and dancing, and, according to Dr. Robertson, (*Inaug. Thesis. Phil.* 8vo. 1805,) travelled like electricity, with astonishing velocity, and was felt almost instantaneously in every part of the above-named States. "The outward expressions of their worship," says Dr. R, "consisted chiefly in alternate crying, laughing, singing, and shouting, and at the same time performing that variety of gesticulation which the muscular system is capable of producing. It was under these circumstances that some found themselves unable, by voluntary efforts, to suppress the contraction of their muscles; and, to their own astonishment, and the diversion of many of the spectators, they continued to act from necessity the curious character which they had commenced from choice. The disease no sooner appeared, than it spread with rapidity through the principle of imitation; thus it was not uncommon for an affected person to communicate it to the greater portion of a crowd, who, from curiosity, or other motives, had collected around him."

Those who have attended modern camp-meetings must have witnessed similar epidemic convulsive and fainting fits, brought on by mental excitement and religious enthusiasm, and propagated through crowds of nervous hysterical females, through the medium of sympathy. These are cases where the moral and affective faculties are powerfully affected, either through physical or mental causes, and reflected upon the corporeal functions, which also suffer.

In connection with this subject, the reader will doubtless call to mind the strange mental freaks and psychological phenomena attendant upon *hysteria*, that proteiform malady, in which the imaginations, the superstitions, and the follies of all ages are at times reflected.

It is true we have not now exhibited in an *epidemic* form, and in such appalling contrast and confusion, the peculiar characters of mental and convulsive maladies which marked the fifteenth century, when religious ecstasy and its opposite, the worship of the devil,—catalepsy, convulsions, homicidal monomania, lycanthropy, and other modifications of nervous disorder, spread over Europe, unchecked by the most stringent laws, by the most sanguinary executions, and by every species of punishment that could be invented. Then the belief in witchcraft and demoniacal possession was universal; this is now exploded, but in its place we have a belief in homœopathy, mesmerism, and all their marvels.

The ordinary forms of hysteria are too well known to need description here, but it is not sufficiently considered that the disease, in the words of Copland, "often manifests itself chiefly by disorder of the mental emotions and faculties." The mental affections connected with hysteria, are referred by Dr. Copland to one or the other of the following: 1st, Certain states of monomania, among which, excited desire, amounting in some cases to nymphomania; 2d, *Ecstases*, and mental excitement, in some cases of a religious nature, in others of different descriptions. 3d, A state of somnambulism. 4th, A form of delirium, generally of a hypochondriacal kind, to which the patient may become subject, or even the victim, owing to indulgence from imprudently kind relatives. 6th, A desire to feign various diseases, sometimes of an anomalous or singular form. "In all these," says Dr. C., "the occasional occurrence of hysterical symptoms, complaints of shifting, transitory, or anomalous pains, disorder of the uterine functions, the nervous temperament and the hysterical state of constitution, will evince the precise nature of the affection." Again: "Hysterical females are not merely capricious or whimsical, but they often become enthusiastic, for a time, in the pursuit of an object, or in cherishing an emotion by which they have been excited. In many such cases, the nervous excitement and vascular turgescence of the uterine organs determine the character of the mental disorder, elevating certain of the moral sentiments, or of the intellectual manifestations, to a state of extravagance, passing, in some instances, into delusion or monomania." Cases, in illustration of these statements, will readily occur to every practitioner, and it becomes a matter of serious consideration, whether character itself does not sometimes innocently suffer from the strange mental freaks of hysterical females, who, in health, sustain a fair moral and religious standing in the community. At any rate, we think it behooves courts and juries to insist on medical testimony in all cases where female witnesses of a hysterical temperament are concerned; especially under circumstances wherein the witness may be justly suspected to have been laboring under a paroxysm of the disease at the time when the events in question are said to have occurred.

ART. XIV.—*Females and their Diseases; a Series of Letters to his Class.* By CHARLES D. MEIGS, M. D., Professor of Midwifery and Diseases of Women and Children, in Jefferson Medical College, etc., etc., etc. Philadelphia: Lea & Blanchard. 1847. pp. 670, 8vo.

THE late hour at which this work came into our hands, will prevent us from giving it that extended analysis which we would desire. It consists of 44 Letters, addressed to the medical class attending the Jefferson Medical College; and they treat of most of the diseases and accidents peculiar to the female, together with an account of the Physiology of Generation, making a neatly got up volume of 670 pages. The very high reputation of the author, in the branch on which he writes, is a sufficient guarantee of the general correctness and value of the instructions given in these letters. The second letter, entitled, "General Remarks on Conduct," contains many valuable suggestions in regard to the intercourse between the physician and his patient. The author strongly recommends a free use of our communicative faculties, and a habit of frankly explaining to patients the nature and probable tendencies of their maladies. Concerning the qualifications requisite for a physician, he very justly remarks as follows, viz.:. "I think that, in order to be a physician, one ought to enjoy strong perceptive faculties; he should be able to make nice discriminations; quickly perceiving the slightest shades of difference in all material forms, superfices, colors, weights, and resistance. The faculty of judging between the relations and differences of things should be of the primest quality; not sudden, hasty, and impatient in its operations, but slow, dispassionate and attentive. The mind and heart of the practitioner ought to be the shrine of truth and probity; his mind should not deceive itself, and his heart should not suffer itself to be deceived and misled, by any earthly temptation, from the narrow and rugged way of duty and conscientiousness. His intelligence ought to be vast, and acquainted, very generally, with what is called knowledge and science by mankind. Particularly should he be fully informed as to the nature of the life-force, as displayed in the various tissues and organs of any animal economy; not in that of man alone, but in the whole zoological series, as well as in the vegetable kingdom of nature."

The author's style exhibits considerable variety, passing from the simple narrative to the highest rhetorical flourishes. For samples of the latter style, take the letter on Sexual Peculiarities, of which the following is a fair specimen: "The great stage of the world, we are informed by the inspired writers, was prepared as the scene of a grand moral drama. The earth and all it inherits, is for man, his use, his delight, his *trial!* But this *mankind*—this genus man—what is it? It is an imperishable unit—it commenced at the beginning—it touches at the middle and the end of time. It is a vast wave rolling down the tide of time, ever rolling, ever descending. Its spray and its foam are lost in the sands or melted in the air, or the fragments of its mortality are broken off and swallowed up in the grave; but the unit is unbroken; the wave rolls onward, onward for ever; per-durable; and shall not be swallowed up till the last trump shall sound, and the last end be come. The sun himself 'grows dim with years,' but the unit, the genus man, springs ever fresh in immortal youth and vigor, like Antares of old, foreshadowing the immortality of that spiritual part to which Adrian, the pagan, addressed his speech as it was leaving the imperial possessor a mere dust-fragment of the vast, ever-living unit, man."

The author devotes four letters, occupying no less than 64 pages, to Prolapsus Uteri—of which the following is his closing summary:

"1. Prolapsus uteri is a disease of the *vagina*, not of the womb.

"2. To cure prolapsus uteri, you are to seek to cure the vagina, and when you have done that, the womb will be found cured also.

"3. The pessary is a suspensory, which is as necessary in the cure of prolapsus, as a suspensory is for an orchitis.

"4. I prefer, as a general proposition, the globe, to all other forms, and Dr. Physick's globe pessary to any other.

"5. If you apply the pessary in cases not suitable, you will do mischief. There ought to be no inflammation nor ulceration either of the vagina or womb."

With all due deference to the age and great experience of Dr. Meigs, we must express the opinion, that the whole of his treatise on this subject is directly calculated to inspire the minds of those he is addressing, with too much confidence in, and incite them to a too free use of, the pessary. Indeed, if the disease actually consists, as the author perhaps justly asserts, in a relaxed and diseased condition of the vagina, we are at a loss to know on what physiological principle such disease is removed by keeping up mechanical distension of the parts. We do not mean to deny the occasional utility of the pessary; but that it is as necessary for the cure of prolapsus, as a suspensory is for the treatment of *orchitis*, is certainly contrary to our own experience, and we believe also to the united experience of the profession.

And although Prof. Meigs has admitted in his 5th proposition quoted above, that the pessary when applied to "cases not suitable will do mischief," yet we looked in vain through his four letters, for the detail of any other treatment for those cases. This we consider an important omission. Our author unreservedly condemns the use of "utero-abdominal-supporters," as the following paragraph will show. —"No, young gentlemen! the utero-abdominal supporter cannot hold up the bowels; it can make the belly too small to contain them, and they will make haste to get out of the squeeze by falling down into the pelvis, where they were not before, and ought never to be.

"How could the Surgeons of the United States and England, put their names, like so many notes of admiration, to such an anti-chirurgical and anti-physiological nonsense? . . . . I thank heaven, you do not see my friend Dr. Hodge's name there; and you may take my word, that mine shall suffer from no such use of it."

There are many other things in the volume before us, that we would like to notice, and commend to the favor of our readers, if our time and space would permit, but we must defer it for the present. We do not object, as many have done, to the epistolary form, adopted by the author of this book: for the interest excited by its novelty, will perhaps overbalance the objections which have been urged against it. But we do most decidedly object to the many typographical and even *grammatical* errors found in its pages. We know that the common plea is, that such things are overlooked in the rapidity with which the work was carried through the press. This, however, constitutes no valid excuse; for there certainly is not such a dearth of medical works at the present day, that every author need to hurry his through the press without half examining the proof sheets. Indeed, we think it is high time that the profession began to demand of medical writers, both greater purity of style and accuracy of composition. And we know of no better place to begin, than with those who stand *highest* as medical teachers and writers. With these hasty comments we warmly commend the work of Prof. Meigs, as a highly interesting and instructive volume.

Art. XV.—*The Pennsylvania System of Prison Discipline—Triumphant in France.* Philadelphia, 1847. 8vo. pp. 24.

Our readers are doubtless aware that a controversy has been going on for a long time, in this country, respecting the best modes of effecting prison discipline, and the amelioration of its evils. The Philadelphia Society, established as long ago as 17~7, has laboured from that day to this, to establish the *separation* of criminals as the only true and just principle of prison discipline; while the Prison Discipline Society of Boston, instituted in 1825, has laboured with equal zeal to establish the *Social* principle, in opposition to individual separation. It is now more than 60 years since the Philadelphia Society memorialized the Legislature of Pennsylvania, in favor of solitary confinement, with labour, as the most effective element of prison discipline, and from that time to this, they have held to the doctrine of strict, absolute, individual separation, as essential to any safe or wholesome scheme of convict discipline, however objectionable, or unfavorable, this principle appeared to others. From that day to this, *socialism* and *separation* have each had their adherents; and the controversy has been carried on with considerable asperity, and not always with fairness. In 1826, the Prison Discipline Society of Boston, espoused the *silent* in opposition to the *separate* principle; that is, they determined, that for convicts to work together through the day, and to be separated through the night, was preferable to separation both day and night, for which the Philadelphia Society was then, and had been long before contending. The Auburn system was commended, because it was cheaper, more healthy, safer for the mind, more profitable, and afforded better opportunities of religious instruction. The *separate* principle was opposed because it was supposed to require expensive construction, and was dangerous to the health both of mind and body, and would not allow the social congregation of convicts for religious instruction. Such are the main arguments on either side, which have been spun out into volumes.

In 1831, two highly intelligent gentlemen, Messrs. *De Beavmont* and *De Tocqueville*, visited the United States, as Commissioners from the French Government, to examine our public prisons. In 1833, they reported without qualification, in favor of the *separate* and against the *silent* principle. Commissioners from other European governments, also visited our country to examine our prisons, and with scarcely an exception, reported entirely and unhesitatingly in favor of the separate, or Pennsylvania, and against the silent, or Auburn principle. Our Boston friends, however, have not yielded the contest. They still go against the solitary system, although quite a feud has recently sprung up among them, which threatens the very existence of their organization, as a Prison Discipline Society. At the head of the dissentients stands George Sumner, Esq., who has recently written a long letter from Paris, to Mr. Quincy, Mayor of Boston, in which he gives a detailed account of the triumph of the separate system in France, and the good effects which have followed its adoption. It appears that there are now in France twenty-three prisons on the separate system. Mr. S. says:—

> " In all of them the prisoners are separated entirely one from the other. Their rooms, which are neat, warm, and cheerful in appearance, are twelve feet long, six feet ten inches wide, and nine feet high. Each room has its flues for heating and ventilating, its fountain for washing, and the necessary conveniences of a private apartment The cost of these prisons, including all the arrangements for water, ventilation, and the courts for daily walks, has varied from 1500 to 4000 francs per cell. The prisoner has the means of calling at any moment, by a signal, the keeper, who is bound to inquire and report his want During the day he receives at least seven different visits, viz: those of the Directors—the Chaplain—the Teacher—the Surgeon—the member of the Visiting Committee whose turn it may be—the keeper, and of the person who inspects his labor. During at least one hour in the day, he takes exercise in the open air, in one of a series of courts, many of which are plant-

ed with flowers and freshened by fountains. A small library is attached to each prison. Those who are in custody only, can have as many books as they choose, and, if they see fit to work, an account is kept of their labor, and its proceeds paid over to them. For those who are undergoing imprisonment as the penalty of crime, only one hour a day is allowed for reading, and their labor is compulsory, one-third however of its profits is given to them as an encouragement to activity. Every Sunday there is religious worship, in which all the prisoners join, without seeing one another."

Not a very uncomfortable life this! A neat, warm, and cheerful apartment, well heated and ventilated, with plenty of servants, a clergyman, a teacher, and surgeon, at one's call; with an opportunity for reading, writing, study and exercise, for which one is well paid, we can scarcely imagine what more a man would ask, especially when surrounded with "flowers and fountains." We doubt very much the propriety of exempting convicts from such privations as will render their imprisonment a burden to themselves, if not a terror to others—and especially do we question the expediency of providing better fare and higher privileges for the condemned transgressor, than the poor, honest, and industrious citizen at large can enjoy. But while the offender feels the bitter consequences of his offence, the dictates of humanity are not to be disregarded, which urge us to mingle with his sufferings all suitable means of softening, improving, and if possible, reforming his moral nature.

But we are chiefly interested in this matter, as connected with its effects upon the health of the inmates. On this point, we quote without comment, the remarks of Mr. Sumner.

"For answers to the special charges which have been brought against this system, that it is the cause of insanity, and is unfavorable to the health and moral education of the prisoners, I invite your attention to the following extracts from private reports to the Minister of the Interior. From Bordeaux, at which place the separate prison of 168 cells has been occupied for four years, the Prefect writes, 1st April, 1846: 'It is now fully established that the health of the prisoners is better under the Separate System than under any other—that they receive with more fruit the consolations of religion—and that, not being excited by the bad example and counsels of their fellows, many reform, while none grow worse.' The physician writes, that he was formerly disposed to consider this system unfavorable to health, but his opinion has now changed. 'Only one original case of insanity,' he says, 'has occurred in the prison, and this was of a convict on receipt of the news of the rejection of his appeal for a new trial.' The Visiting Committee, composed of some of the most honorable and enlightened citizens of Bordeaux, write: 'For our own part, most of us having originally formed opinions unfavorable to the system of separation by day as well as by night, we deem it our duty to declare, that *experience has proved that we had fallen into error*; and that we consider the system of separate imprisonment, accompanied by labor, reading, religious services and daily walks—the system, in short, as it is practised at Bordeaux—as one of the reforms which reflect the greatest honor on our age.'

"The Separate System prison of Tours has 112 cells, and has been occupied for three years. The Prefect of the Department of which Tours is the capital, writes on the 14th of April, 1846, enclosing to the Minister the Reports of the Chaplain, Physician and Directors of the Prison. 'These reports establish,' says the Prefect, 'in the most complete manner, that in regard to the sanitary condition and the moral education of the prisoners, the system of total separation, so violently and so unjustly attacked, produces the most remarkable results. Of a total number of 1626 persons who have entered the prison since its inauguration, 16 only have been transferred to the hospital, and one only has died—and this single case of death was of an old man of 70, who was laboring under a chronic affection of the lungs. If we seek for the influence which it exercises on the intellectual faculties of the prisoners, we must recognise that, far from disturbing their reason, it produces on their minds the most salutary results. In proof of this, I may mention that not a single case of insanity has occurred in the prison, and that many who have been condemned for a term, which requires their removal to the *maisons centrales*, solicit as a real favor, the permission to complete their imprisonment in their cell. Since my last report, of 17th January, 1845, I have received thirteen petitions to this effect.'

"The report of the physician, the enlightened Dr. Haime, declares that there are certainly fewer diseases under the new system than under the old, and that the contagious diseases of the town never penetrate the prison. He goes into full details, and in addition finds himself called upon to repel a charge publicly made against the prison. The facts, as he explains them, are these: 'A writer at Bordeaux had attacked the system of separate imprisonment, on the authority of the charges made in the Report of the Boston Prison Discipline Society, against the Philadelphia Prison, and having repeated these charges, had continued: 'At Senlis, at Vannes, and at Tours, the same results have been found, constant attempts at suicide—madness—frightful mortality!' 'It is not my province,' says Dr. Haime, 'to defend the Philadelphia prison from the attacks of the Auburnian Society of Boston; neither can I speak of the prisons of Senlis and Vannes; I have not seen them. But for that of Tours, I must declare that this writer has been led completely into error, imposed upon by statements totally false, conceived in party spirit, and which I defy him to prove.' He concludes: 'My own experience of this system serves to confirm the opinion twice solemnly announced by the Royal Academy of Medicine, that, far from menacing the existence, either physical or moral, of the prisoners, it is, on the contrary, as compared with former systems, eminently proper to fortify and ameliorate both."

"The prison of Rethel, in the Department of Ardennes, has 108 cells. The physician writes, in March, 1846: 'The sanitary condition of the prison is most satisfactory. Since it was opened, we have had no case of insanity, no suicide, no attempt at suicide, and not the slightest symptom, in any one, of a derangement of the mental powers. The cases of serious illness in 1845, were only four in number, and these having no connection with the construction of the cells. The 1st was a drunken butcher, who was ill for 10 days from *delirium tremens*. The 2d, a woman in childbirth, under treatment for 18 days. The 3d, an old man menaced with paralysis, under treatment for 6 days. The 4th, a prostitute, suffering the consequences of her vices. During the last three months of 1845, the whole expense for medicines in the prison was 5 francs 55 centimes—[one dollar and 3 cents!]. The only complaint generally prevalent is that of privation of tobacco. In one of my preceding reports, I said, from the observations which I had been able to make, I *thought* that Separate imprisonment might be applied without danger to those condemned for long terms; but now, from my further experience, I am prepared to be more explicit, and to *affirm* that the Separate System, as it is followed at Rethel, is far from being injurious to the health of prisoners, and that it does not in any manner predispose them to insanity.'

"From Montpelier, the physician of the separate prison, who is also a professor of the distinguished Medical Faculty of that ancient town, writes: 'There are fewer maladies under the new system than under the old. *Pulmonary complaints have above all diminished.* The average number formerly was 31 cases in 121. Under the influence of the new system, there have been only 17 in 112. Rheumatic affections have diminished one half. The epidemics of different seasons do not penetrate the cells, while under the old system, every disease in town was repeated in the prison. The cases which occur are not only less numerous than before, but are of shorter duration. Prisoners who were feeble, emaciated and languishing, on arrival, have acquired in a short time all the external signs of perfect health. Can any one doubt any longer of the good effects of the system on those who are well, when it aids so powerfully in restoring the health of those who are ill? Out of 658 men and 166 women received in the prison, 3 men and 1 woman have been put under treatment for mental derangement, but each one of them had shown signs of insanity before coming to the prison; and experience shows that the system of isolation, with its attendant visits, instead of increasing, has a tendency to moderate and quiet the predisposition to mental derangement.'

"The testimony of the professor of Montpelier relative to the diminution of pulmonary complaints, will, I cannot doubt, attract serious attention in America. The disadvantages, real or imaginary, of the Philadelphia prison, have been loudly trumpeted to the world, but few voices have been raised to give warning of the seeds of consumption, which are annually sown in our prisons. I have reason to believe, that if a careful inspection were made in the Massachusetts state prison, the number of those suffering under chronic or acute affections of the lungs would be found far greater than is generally supposed.

"You will perceive, sir, how complete and satisfactory is the evidence furnished by these prisons, in answer to the charges with which their system has been assailed. From all of the 23, but one opinion is expressed, as to the importance and safety of this great reform. In the extracts presented to you, I have purposely chosen prisons situated in the extreme parts of France, and occupied by populations differing widely in temperament, so as to meet the objection, which might arise in some minds, that the success of the system was partial only, and was due to certain peculiarities of climate or of social character. Bordeaux, for instance, is a southern city, having many poor, notwithstanding its great wealth, and afflicted with those vices which are so often found where the extremes of fortune meet. It has also a large sea-faring population, which there, as everywhere, is not remarkable on shore for its rigidity of life. Tours is surrounded by an industrious, agricultural population, but it is on the banks of the Loire, the buisterous boatmen of which help to people its prison. Montpelier is noted throughout France for the quick and fiery temperament of its population, accustomed to live in the open air, under the sunny sky of the south. Rethel, on the contrary, is a manufacturing town, in the extreme north, on the Belgian frontier, in a part of the country where lymphatic temperaments and beer-drinking are prevalent.

"In Paris, the great *Maisons d'arret*, on the Separate System, which will replace the Force, the Conciergerie and other minor prisons, have been for some time in construction, and will be opened probably in 1847. The cellular prison nearest to Paris, is that of the Department of Seine and Oise, at Versailles. The population of this prison is made up, in great part, of those who frequent the capital or who are among the hangers-on of the *ginguettes* and wine-shops of its *ban-lieu*. Here, if anywhere, one might look for but slight success from the adoption of the Separate System. The physician of the prison, Dr. de Balzac, professor in the Royal College of Versailles, writes, however, in May, 1846: 'The sanitary condition of the cellular prison is incomparably better than that of the prison in common Experience has shown that the system is favorable to the health of the prisoners, that it has no deleterious influence on their intelligence, and the most simple observation enables one to satisfy himself, that it is favorable also to their moral education.'"

Art. XVI.—*Tracts on Generation. Proofs that the Period in Maturation and Discharge of Ova are, in the Mammalia and the Human Female, independent of Coition, as a first Condition of their Propagation.* By T. L. G. Bischoff, D. M., Professor of Physiology at Giessen. Translated from the German. By C. R. Gilman, M. D., Prof. of Obstetrics, etc., College of Physicians and Surgeons, N. York; and T. Tellkampf, M. D., Gebhard Professor, Columbia College, New-York. S. S. & W. Wood, 261 Pearl-street, N. York. 1847. 8vo., pp. 65.

Although the *facts* contained in this pamphlet have been repeatedly laid before the profession, through the medium of some of our medical journals, yet the translators have done an acceptable service by presenting them in the form of a literal translation, thus enabling the reader to judge of the soundness of the conclusions, from the recorded facts and observations.

It has been abundantly proved by the investigations of Raciborski, Robert Lee, Gendrin, and others, that the ovary, at the time of each menstruation, is in a state of great excitement, and that a Graafian vesicle then bursts, and a corpus luteum is formed in its place. Our author confirms these observations, having examined four females who died suddenly during, or immediately after the act of menstruation; in three of them, he discovered ruptured Graafian vesicles on the ovaries, filled with coagulated blood; in the fourth, there was a vesicle enormously enlarged, (about seven lines in diameter).

It cannot be denied that one step has been taken in advance of what was known to the ancients, namely, the pre-existence of the ovum in the ovary in the human female, entirely independent of coition. The fact has always been known, that in relation to plants, as well as some of the lower animals, reproduction was dependent on the fact that a parent organism produced certain materials, ova or semen, by the direct action of which, the one upon the other, the germ capable of development was produced. The egg of the hen, and the ova of the frog, are cases in point. In many instances the formation and meeting together of these two generative materials, effected by no agency of their own, and their mutual relations, are often under the influence of many accidental circumstances. The fact, we repeat, that ova are formed, matured, and usually discharged, by the female organism, at certain regular intervals, quite independent of the formation and maturation of the semen of the male, which likewise happens either periodically or continually, has been known from the earliest times. But in the human female, as well as other mammalia, the formation of a germ, or ovum, was supposed to be the result of coition. This function was believed not only to render the female germinative material capable of development, but to *produce it*. We are indebted to Von Baer for the discovery, in 1827, of the ovarian ovule in the mammalia and the human female; and the reason it had escaped former observers, is to be found in its extreme minuteness. It was necessary, however, to go one step further, and prove that the discharge of the ovule from the ovary had no necessary connexion with coition. Our author, in his earlier investigations, tried to discover at what period after coition, the ovule was discharged from the ovary, in different animals, and what part the semen took in this discharge. And he furnishes satisfactory proof, that the male semen comes in actual contact with the ovum, having penetrated through the uterus and the fallopian tubes to the ovary. This, however, was nothing more than the old doctrine, viz.: that the fecundation of the ovum takes place on the ovary at different periods after coition in different animals, the semen penetrating to the ovary, and causing the discharge of ova from it.

The law of the generation of mammalia and man, then, according to the present state of our embryological knowledge, may be thus stated:

In them, the ova advance in the ovary, through regular stages of development to maturity, quite independent of any agency of the male semen. These ripened ova are detached and discharged from the ovary, in the human female, at the period of menstruation; in the lower animals, at the period of heat. At this time only, moreover, is the sexual appetite manifested in the lower animals, and in the human female it is then strongest. If coition then take place, the fecundation of the ovum results from the direct effect of the male semen upon it. If coition is not then effected, the ovum is nevertheless loosened from the ovary, and enters the tube, where it perishes. The relations of time may vary, in different animals, according to different, but still defined limits. The semen may have sufficient time to reach the ovary before the ovum is discharged, and the semen may meet it in the tubes, but the effect of the semen upon it must always take place in the tubes, or it cannot be developed, the process beginning there. Coition can only result in fecundation at the time of the periodic maturation of the ova.

In the present work, our author confines himself particularly to the proof that in the mammalia, at the time of heat, ova are discharged from the ovary, and enter the fallopian tubes, whether coition takes place or not, and whether by its instrumentality, the semen be brought in contact with them or not. Our limits will not allow a detail of these experiments upon rabbits, dogs, rats, and other lower animals, our only object being, to state the results at which he has arrived. It has long been admitted, that the cause of menstruation, as well as sexual instinct, and of the whole female character, is to be found in the ovaries, and that the uterus, in this relation, is quite of secondary importance. The following facts, detailed by Dr. Roberts, in his Travels from Delhi to Bombay, in respect to the castrated women of India, are interesting.

The individuals he examined, were about 25 years old, of large size, quite muscular, and in full health; they had no mammæ, no nipple, no hair on the pubis, the orifice of the vaginæ was completely closed, and the pubic arch so narrow, that the ascending ramus of the os ischium, and the descending ramus of the pubis of the opposite sides, come almost in contact. The whole pubic region showed no deposit of fat, and the nates were not more developed than in males, while the rest of the body had the usual quantity of fat. There was no trace of menstrual secretion, nor any discharge vicarious to it; nor was there any sexual appetite.

These recent advances in embryological science aid us in explaining some facts, known from a very remote period; as, for example, that females conceive, most certainly, immediately after menstruation, and that no mode of reckoning the period of pregnancy is so accurate as that from the last menstruation. Prof. Naegle states that he has never been deceived in regular cases, when reckoning 9 months and 8 days from the last period; and he also states that he has, in several cases, removed barrenness, by advising copulation immediately after or even during the menstrual flow.

It may then be considered sufficiently established. that in the human female, during menstrual life, the maturation and discharge of an ovarian ovule takes place every four weeks, accompanied by a contemporaneous discharge of blood, and that this periodical maturation of an ovule is the primary and principal condition on which conception and pregnancy depend. and that at this time, only, will coition be followed by conception. According to Bischoff, the discharge from the uterus begins while the ovule is still in the Graafian vesicle, and is not detached till the cessation of the flow; and while in the tube, it is probably capable of being fecundated for several days, if coition supervene. Our author is inclined to think, that the human ovum still exists in the tube, and is susceptible of fecundation for from 8 to 12 days after its discharge, and after the menstrual flow has ceased. This, however, is nothing more than a hypothetical opinion, requiring further investigations and proof, before it can be admitted. Our author, moreover, is of opinion, that no ordinary causes, such as physical or moral excitation of the sexual instinct, can accelerate the time of maturation of the ova, or affect the period of possible fecundation; and that all observation upon menstruation proves, that the postponing or anticipation of a period, is only produced by powerful influences. Menstruation, then, may be regarded as merely indicating the time of the ripening of an ovule; that it is the result or consequence of this phenomenon, has not been made to appear; it is, probably, a mere coincidence, and they do not hold to each other the relation of cause and effect.

The question may, however, be asked, if conception is dependent on menstruation, and this on the maturation of an ovum, how is it possible that females conceive, never having menstruated? Bischoff answers this question, by stating, that though the discharge of blood is a normal and easily-cognizable symptom of the maturation of an ovum, the latter is not essentially dependent on it, this periodic maturation of ova being seen, in the animal kingdom, both with, and oftener without, such discharge of blood. Menstruation, therefore, in the view of our author, is, in the human female, an entirely normal and important, though by no means essential, but rather accidental symptom of ovulation. It may be wanting, and yet ova mature, and be therefore susceptible of development and fecundation; and this may be easily reconciled with the fact, that in such women no diseased appearances are found.

We have no disposition to enter upon the subject of priority of discovery, in connection with recent advances in embryological science. Our author claims for himself, the exposition of the characteristics of the mature ovum, and especially its passing into the tube *without coition*, although it is very evident, that M. Pouchet had previously advanced the same opinion, and furnished important, though perhaps indirect proofs thereof. The grand discovery, however, in connection with this subject, and which has led to more recent discoveries, was that of Von Baer in 1827, who found for the first time the ovarian ovule in the human female. We trust the talented and meritorious translators of the present work will proceed with the task they have so laudably undertaken, and give us still further translations of embryological works. We would commend to their notice, the able work of M. Pouchet, who, according to Bischoff, has developed the law upon which the generation of the mammalia and man depends, more perfectly than any preceding writer. We need not add, that it is the duty of every medical man to patronize the present undertaking.

Art. XVII.—*Materia Medica and Therapeutics.* By Martyn Paine, A. M., M. D., etc. New-York. Samuel S. & W. Wood. 12mo. 411 pp.

The objects of this comprehensive manual are: 1st. To arrange the Materia Medica upon intelligible, physiological, and therapeutical principles. 2d. To indicate the relative therapeutic value of the various articles, under their different denominations, by arranging them in the order of their value. 3d. To give to the student a comprehensive and ready view of the merits of the various articles composing the Materia Medica, and of their relations to each other, physiologically considered.

This work is too well known to our readers to need any commendation from us; it is especially adapted to the use of medical students, particularly those in attendance on the author's lectures. The plan is entirely original, and has been very successfully carried out.

Art. XVIII.—*The Practice of Medicine. A Treatise on Special Pathology and Therapeutics.* By Robley Dunglison, M. D., etc. 2 vols. 8vo., pp. 767, 729. Philadelphia. Lea & Blanchard.

This is a greatly enlarged edition of the excellent work of Prof. Dunglison on the Practice of Medicine, which we have repeatedly noticed on our pages. The author has freely availed himself of what has been written on the subject of pathology and therapeutics, since the appearance of the last edition, including the valuable Treatises of Canstatt, Fuchs, Wernderlich, Valleix, Grisolle, Dickson, etc.; so that it may be justly said of this work, what can be said of few others, that it is a true exponent of the existing condition of knowledge on the important departments of which it treats.

Art. XIX.—*Principles of Physics and Meteorology.* By J. Muller, Prof. of Physics at the University of Frèyburg. First Am. Edition. Philadelphia. Lea & Blanchard. 1848. 8vo. pp. 635.

The subjects of which this volume treats, are numerous and important; and such as particularly claim the attention and study of medical men. We here have presented in a masterly manner, all the most important facts and theories relating to *Statics, Hydrostatics, Dynamics, Hydrodynamics, Pneumatics, the Laws of the Motions of Waves in general, Sound, the Theory of Musical Notes, the Voice and Hearing,* *Geometrical and Physical Optics, Magnetism, Electricity and Galvanism, Heat, and Meteorology,* etc. It is a work especially needed, and we would fain hope that every medical student would make himself master of its contents, ere he presented himself as a candidate for the honors of the Doctorate. We hope it may speedily find a place in the library of every medical man, and enter into the curriculum of prescribed medical study.

ART. XX.—*A Defence of Phrenology, containing—*I. *An Essay on the Nature and Value of Phrenological Evidence;* II. *A Vindication of Phrenology against the attacks of Dr. J. Aug. Smith;* III. *A view of facts relied on by phrenologists as proof that the cerebellum is the Seat of the reproductive instinct.* By A. BOARDMAN. New-York. 1847. 12mo. pp. 222.

WE can at present barely call the attention of our readers to the above work. It is an able and eloquent defence of phrenological science, against the attacks of its adversaries, especially those of Prof. J. Aug. Smith, as contained in his "Select Discourses." It is written in a calm and philosophical spirit, characterized by great candor and fairness, and displays an acquaintance with the subject, in all its details, rarely, indeed, surpassed. As we intend shortly to notice the work more particularly, in connexion with the whole subject of phrenology, we can only at present record our favorable opinion of its high merits, and recommend it to the attention of our readers.

ART XXI.—*Treatise on Fractures in the vicinity of Joints, and of certain forms of accidental and congenital Dislocations.* By ROBERT W. SMITH, M. D., &c. Dublin, 1847. 8vo., pp. 314.

THIS is a highly-valuable Treatise on Fractures which occur in the vicinity of joints, especially those whose differential diagnosis is attended with difficulty, and certain forms of dislocation. It is a department of surgery in which much has been done by the Coopers and others; Breschet, Dupuytren, Bouvier, and Guerin, have also done much towards elucidating the subject of congenital luxations; but this is the first treatise particularly devoted to the consideration of such accidents.

As to the manner in which the work is executed, we can speak in the highest terms; every form of fracture, etc., is illustrated by a great variety of cases, as well as by beautifully-executed plates, done on copper, in the best style of the art.

The subjects treated of are:

1. Diagnosis and Pathology of Fractures of the neck of the femur.
2. Of Chronic Arthritis of the Hip-joint.
3. Of Fractures of the bones of the Forearm, in the vicinity of the wrist-joint.
4. On Fractures of the Humerus in the vicinity of the shoulder-joint.

5. On Fractures of the acromial extremity of the Clavicle.
6. Of Dislocations of the bones of the Foot.
7. Of Congenital Luxations of the wrist-joint.
8. On Congenital Dislocations of the Shoulder.
9. On Dislocations of the Lower Jaw.
10. Additional Observations on Fractures of the Radius, Dislocations of the Bones of the Foot, and Congenital Luxation of the wrist-joint.

ART. XXII.—*Ninth Annual Report of the Directors and Superintendent of the Ohio Lunatic Asylum, for the year* 1847. Columbus, 1847. 8vo., pp. 72.

A RECENT personal examination of this institution, whose Report we briefly design to notice, enables us to speak in the most favorable terms of its general management, and of the inestimable benefits it is annually conferring upon an afflicted portion of our fellow-beings. The building, which is about a mile from the business portion of the city, will compare well with the best of the kind in this country, or, perhaps, in Europe. It presents a noble front of 376 feet, with wings extending back from the extremities of the central buildings, each 218 feet in length, and 40 in width.. All these structures are of marble, and three stories high above the basement. The opening in the rear of the front buildings, between the northern extremities of the east and west wings, is filled by lodges two stories high. The large enclosed square thus formed, is equally divided by the building containing the chapel, which is connected with the main building by a latticed gallery, which renders it easy of access, and furnishes a pleasant place of resort for the patients, when the state of the weather allows them to visit it. This causes a large court on either side of the chapel building, which is to be ornamented with shrubs and trees.

The Ohio State Asylum went into operation in 1838, and the present is the Ninth Annual Report. The land first purchased consisted of thirty acres, and cost $1,980. Since then thirty-four acres more have been added, making sixty-four in all, at an aggregate cost of $6,905. The cost of the entire buildings has been $153,821 ; $48,671 having been the labor of convicts. The whole number of patients received into the Institution has been 1,047—557 males and 490 females ; 311 pay patients, and 736 were supported by the State ; 528 were chronic cases, or of more than one year's standing, and 519 were recent. Of the whole number, 603 have been discharged, and 115 have died. The whole number cured is 448—250 males and 198 females. The per centage of cures of those discharged, in recent cases, is 90·20 ; of chronic cases, 28·3, or 62·40 per cent. annually of the whole number received. The average number in the Institution during the year ending in Nov., 1847, was 318. During that period, 181—90 males, 91 females, were received : 99 recent cases, and 82 chronic ; whole number cured during the year was 90. During same period 120 were discharged, and 23 died—78 recent, and 65 chronic cases. The per centage of cures of recent cases was 88·46 per cent., of old cases 33·85—average 63 per cent. Entire expenses of the year, $28,070. The Institution is capable of accommodating 340 patients.

We are very happy to find the Directors recommending the abolition of the *distinction of pay and pauper patients*, and we trust our own State Asylum will follow the example. These institutions are reared by the property of the State, and its entire property is taxed for their support. There is no wisdom in the policy which compels the sufferer from insanity to pay a further tax equal to his support for admission. If he be the head of a family, his calamity is usually followed by straitened pecuniary circumstances, and the charge of supporting him in the asylum adds to their distress and embarrassments. How often do we see the means of patients exhausted in effecting their cure, and when they leave the asylum, compelled to suffer the ills of destitution! and when discharged as incurable, they are often thrown upon the world to suffer the double ills of destitution and the loss of reason. It is a distinction which inflicts pain unnecessarily in many sensitive minds, especially where the sufferer has known better days; and we have repeatedly known instances where families in reduced circumstances have refused to send an insane member to such an institution, because they were unwilling to have him received and classed as a *pauper* patient. This distinction of *caste* is hostile to the spirit of our free institutions—painful to the friends of those who are sent as paupers, and to those patients themselves when recovered. It is a distinction done away with in our common schools,—let it be abolished in all our institutions which are built up and sustained at the public charge. Let the loss of reason of the humblest citizen be regarded as it is, as a public calamity, and let the whole community be taught to regard it as a sacred duty to supply, at the common expense, all possible curative means while a hope of alleviation remains. We doubt not that the measure would be sustained by public opinion in every State in the Union.—Which shall have the honor and the glory of first adopting the measure?

To Dr. Awl, the able superintendent, we would express our kind obligations for the civilities shown us in examining the Institution, and all the details of its internal economy and management. To him the State of Ohio is under lasting obligations for his important aid in planting the germ of the institution, for nourishing and cherishing it until it has expanded to its present noble amplitude, and for his unremitting assiduity in carrying out, day by day, the benevolent objects of its establishment.

Art. XXIII.—*The New-Jersey Medical Reporter, and Transactions of the New-Jersey Medical Society.* Edited by Joseph Parish, M. D. October, 1847. Burlington. 8vo., pp. 84.

So far as we are informed, this is the first medical periodical ever issued within the State of New-Jersey. It purports to be a medium for the publication of the transactions of the New-Jersey Medical Society, while it will be devoted to the interests of medical science generally. It is to be issued annually, at the low price of $2 a year. Judging from the highly-valuable contents of the present No., we cannot doubt that the publication will receive, as it highly merits, the general support of the profession in our sister State.

Art. XXIV.—*Illustrations of Medical Botany, consisting of Colored Figures of the Plants affording the important articles of the Materia Medica, and descriptive Letter-Press.* By Joseph Carson, M. D., Professor of Materia Medica in the Philadelphia College of Pharmacy, etc. The Drawings on stone, by J. H. Colen. Philadelphia, 1847. R. P. Smith, 144 Chestnut-street. No. 2.

The present No. of this useful and beautiful publication, consists of twenty finely-executed colored plates, with the accompanying descriptive letter-press, by Dr. Carson. We can only repeat what we have already said, in our notice of the first number, that the work well deserves the patronage of the profession, and should be in the library of every physician who wishes to keep pace with the science of Medical Botany. Three numbers more will complete the work.

PART THIRD.

American Intelligence and Editorial.

ETHERIZATION AND CHLOROFORM.—We have been not inattentive observers of the progress of etherization since it was first introduced to the notice of the profession by the late lamented Dr. Wells, besides having done our part in experimenting, in order to arrive at some safe and satisfactory conclusions. The result has been, that our early opinions, as expressed in some back Nos. of our Journal, have been somewhat modified, though they have not been essentially changed; and we now regard *anæsthetic* agents as likely, at least for some time to come, to do as much harm as good in the practice of medicine and surgery. Not but what a valuable discovery has been made,—a discovery which will always be regarded as one of the most important of the present age, and one from which, eventually, important results will follow. But such has been the enthusiasm excited by the discovery, especially on the other side of the Atlantic, that surgeons, physicians and accoucheurs have vied with one another in seeing how far the process of etherization could be carried, and in what number and variety of cases it might be employed; operations have been sought apparently for the sole purpose of testing the reality of the wonder-working agent; all sorts of medical, as well as surgical cases, have been brought under its influence; farriery has experienced its benefits; and even the bee-hive has been robbed of its sweets while the industrious occupants have been wrapped in temporary forgetfulness. Truly this is an anæsthetic age! The age of gold, and of iron, and of bronze, has passed, and that of etherization and chloroform is dawning!—what will it be at its meridian?

But in all seriousness we ask, where is this mania to end? Has reason entirely fled the profession, and are we really the unreflecting, unreasoning herd that we are likely to he considered? For what is an anæsthetic agent? Why, nothing less than one which can produce temporary paralysis. And how is this paralysis, this loss of sensibility and of intellect produced? Chiefly, undoubtedly, by producing a state of asphyxia,—a condition of the blood unfitted for the support, for any length of time, of animal or organic life. Something, doubtless, is due to the specific impression made upon the brain—the cerebral lobes, and the medulla oblongata;—but most of the phenomena result from the chemical changes wrought in the blood itself. This is especially the case with alcohol, sulphuric ether, and chloroform. It has always been known that there was total insensibility during deep intoxication from alcohol, in which condition the arterial blood assumes the color of the venous, from the oxygen received into the lungs converting a portion of the alcohol into water and carbonic acid, by combining with the hydrogen and carbon of the spirit, and intoxication does not pass off until the blood has again resumed its normal condition.* These effects have often resulted from inhaling the vapor of alcohol in spirit vaults. The same asphyxiating condition of the vital fluid is brought about by the inhalation of *ether*.† It has been abundantly shown, by recent experiments, that arterial blood always becomes dark under the effects of ether—that this change precedes the insensibility, and that the arterial color of the blood is restored previous to the sensibility. It is so when animals inhale nitrogen. Insensibility is always preceded by a dark color of the arterial blood, and a return to its natural color precedes the return to sensibility. But it does not therefore follow that asphyxia, thus brought about, is necessarily attended with serious danger, or that it would not be justifiable, under certain circumstances, to induce it. The question to decide is, what are these circumstances? Sulphuric ether is a poisonous agent, and has proved fatal, when inhaled, in many cases. Two cases of apoplexy thus brought on are reported in the fifth vol. of the British Journal of Science. Similar cases are detailed by Orfila, in his Toxicology. Christison and Taylor, in their works on poisons, give fatal cases from the same cause. These were published many years ago, and are known to the profession. Let us look at the phenomena of etherization a little more in detail.—The effects begin to be manifested soon after the ether enters the lungs. At first the brain is stimulated, the respiratory movements are increased in frequency, the pulse is correspondingly hurried, but soon they both begin to flag,—the respiration becomes slow, deep, and loud; lethargy is creeping on apace—the skin assumes a pale or livid hue, and is cold to the feel—the lips become purple—the pupil dilates—sensibility fails, and the whole body becomes flabby and relaxed. Three or four drachms of ether introduced into the blood through the lungs, will produce these effects, in most cases, in from three to four minutes; but if fresh air be substituted as soon as unconsciousness begins, they as rapidly disappear. The sudden subsidence of the symptoms is, of course, owing to the rapid escape of the vapor from the lungs. When the vapor is inhaled for a longer time, say ten to fifteen minutes, more profound coma ensues; the pulse sinks and becomes imperceptible, the patient is roused with great difficulty, if at all; there is temporary paralysis induced—sensibility is suspended. In some cases, although there is a general relaxation of the limbs, there is still a power of moving them, and the intellect and senses are almost unaffected, while general sensation is lost. The involuntary muscles, and the organs supplied by the ganglionic nerves, retain, to a considerable degree, their normal functions, especially the uterus, whose contractile efforts go on almost unimpeded during etherization.

The effects, however, of ether-inhalation, vary according to idiosyncrasy, temperament, and other conditions. In some, considerable bronchial irritation results; some are so excited, as to require considerable effort to restrain them; in some, nausea and vomiting are prominent symptoms, which occasionally continue for several hours. The conjunctiva is generally injected with blood, and the pupils dilated or contracted, occasionally fixed: The eye-lids are closed, and if the patient is unable to open them when requested, it is considered a good test as to the proper time of commencing an operation. The most remarkable phenomena connected with etherization, are doubtless those relating to the sensitive and intellectual functions. In some instances, the sense of feeling is suspended, while the intellect remains intact; the brain takes cognisance of external objects, while it either does not notice the impressions made on the sensitive nerves, or they do not produce on it the usual effects. This is readily explained by the doctrine now generally recognised by physiologists, that the seat of sensation—tactile sensibility—is seated in the great cephalic ganglia (tubercula quadragemina,) while the intellectual functions reside in the cerebral lobes. If these lobes were, as once supposed, the common centre of all impressions, as well as of the intellectual operations, it would be difficult to understand how common feeling or the sense of touch could be suspended, while that of sight and hearing continue. But if the sense of touch reside in the tubercula quadragemina, there is no difficulty in supposing it may be suspended, without the suspension of the function of the cerebral lobes. The same remark will apply to the sense of sight and hearing. But it is not so easy to explain why etherization should, in some instances, affect the seat of common feeling,—the special ganglia,—without affecting the cerebral lobes, and vice versa. Flourens and some other French physiologists have attempted, by experiments on animals, to show the order in which different portions of the nervous system are influenced by ether: but so far as we have observed, the symptoms are not so regular as to enable us to determine with precision, which portion is first affected; at any rate, we have observed no regular order in the phenomena manifested. The intellectual phenomena, if any are witnessed, may be sad or gay; violence and combativeness may be manifested; passion, hysteria, &c., according to the sex, constitution, or susceptibility of the patient.

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* The composition of alcohol is *oxygen* 1 eq., *carb.* 2, *hyd.* 3.

† The composition of ether is *oxygen* 1, *carb.* 4, *hyd.* 5.

In experimenting with ether on dogs, we find they lose the faculty of sensation in eight minutes; and if they continue to respire it, perish in about 40 minutes; and on dissection, the vessels of the pia mater, medulla oblongata, and sinuses of the brain, are filled with dark-colored blood, also both sides of the heart; while the liver and kidneys are equally congested, and the blood throughout the body is black and fluid. We find the cause of death, then, partly in the venous state of the blood, and its accumulation in this condition in the brain, and partly in the specific effect produced by the application of a poisonous agent to the cerebro-spinal centres. To prevent these fatal results, it is found necessary in the human subject to allow of the admission of a considerable amount of pure air; but, as Mr. Taylor has truly remarked, unless there is a complete restoration of sensibility and consciousness, the poison must go on accumulating in the system; and if the individual be allowed to recover thus completely, it may be regarded as a commencement of its poisonous action, de novo; if not thus allowed to recover, he is in danger of sinking under its effects. Would not the continual exhibition of morphia or strychnia, as the same writer asks, at intervals so short as not to allow of a recovery from each successive dose, cause an accumulation in the system, and lead to fatal results? Is it safe, are we justified in administering it *gradatim*, from time to time, to parturient females, perhaps during several successive hours; thus loading the blood more and more with carbon, to save those pangs which the wise Creator has, for some inscrutable purpose, connected with the process of child-bearing? Surely, the fact that thousands have recovered from inhaling it for a short period only, is not sufficient to decide this question. Because a man might survive fifteen minutes in the Black Hole of Calcutta, we are not therefore to infer that it would be safe for him to remain there over night. Let it be remembered, that while ether is circulating in the blood, its carbon and hydrogen are constantly using up the oxygen of the vital fluid and converting it into carbonic acid and water. We believe it will be found, as maintained by the discoverer of etherization, the late Dr. Wells, that the nitrous oxide gas, which contains no carbon nor hydrogen, but one atom of nitrogen and one of oxygen, will be found far safer than ether or chloroform, and will be preferred therefore by practitioners in cases where an anæsthetic agent is to be employed.

Let the advocates of indiscriminate etherization say what they may, there cannot be a shadow of doubt that numerous valuable lives have already fallen victims to its use. A few months since, the foreign journals abounded with such cases. Mr. Taylor, in his recent work on poisons, relates several unequivocal cases of this kind: one in which the vapor of ether was respired at intervals, for only ten minutes; and another during a period of thirty-five minutes, in which, he states, the vapor produced a perfect state of paralysis of the brain and nervous system, and where, on dissection, the appearances already described were presented. In some cases, where surgical operations have been performed, there have been alternate manifestations of excitement and depression of the sensorial powers, at one time resembling delirium, at another syncope, and again passing into violent intoxication, until the patients have sunk under the effects; symptoms, not to be confounded with those which attend collapse from an operation. The conclusion at which Mr. Taylor arrives, (*loc. cit.*) is fully sustained by facts, that the inhalation of ether must be regarded as temporary poisoning, with, *ceteris paribus*, a better chance of recovery than exists in most other instances of aerial poisoning.

We have referred to the fact, that arterial blood becomes changed to venous under the influence of ether inhalation. It should be recollected also, that it becomes more fluid, as in asphyxia from other causes. The relative proportion of serum is manifestly increased.

Thus much as to the toxicological bearings of the question. We are fully aware, that in the minds of many of our readers, the question as to the propriety of etherization in surgical and obstetrical practice is already settled, and that they regard it as an invaluable boon to the practitioner as well as the patient. So unquestionably it is, if judiciously employed in proper cases, and under proper circumstances; but to suppose that so powerful a toxicological agent is not likely to produce dangerous results, unless used with the utmost circumspection, is contravening all that is known relative to other poisons of equal potency.* During the early period of etherization, when inhalers with the valved tube were employed, accidents were undoubtedly far more frequent than they have been since the introduction of the sponge; but still we hear of them occasionally, and they will always be likely to occur from idiosyncrasy, or peculiarity of constitution, even when etherization is cautiously practised. In surgery, we would say, that etherization may be expedient, where the danger from the shock of an operation is greater than from inhaling the poison, as in amputation, lithotomy, extirpations, and operations for anchylosis and necrosis of the larger bones; it might be proper also to resort to it in cases of dislocation of the arm or thigh, where relaxation is desirable; in painful operations on the rectum, and possibly in a few other cases; but immunity of pain merely, should never be purchased at the risk of life, nor even where it would interfere with the proper performance of an operation. It is, doubtless, often important that a patient should retain a voluntary control over his movements, not only for assisting the operator by executing those he may desire, but by abstaining from those which would interfere with the object in view. In careful dissections, as those for hernia and removing tumors from important parts, as about the jaw and neck, nose and mouth, etherization would be inexpedient; and so also in all cases of great weakness or exhaustion, and where there is any disease of the lungs, or heart, or an apoplectic tendency. In the minor operations of surgery, and in dentistry, ether inhalation is the height of folly. The medical uses of ether do not come within the scope of our present design.

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* We are happy to observe some very judicious remarks on the dangers of ether inhalation in surgery, sustained by several well-marked cases, in the Am. edition of Chelius's Surgery, vol. iii., p. 767.

With respect to the employment of ether in obstetrical practice, we doubt whether its general use, as recommended by some, is either desirable or expedient. We respect the motives of those of our professional brethren who are aiming to remove the primeval curse from the daughters of Eve, but it is not yet proved that we can, with safety, reverse the decree of Nature which connects suffering with the process of parturition. It is, doubtless, our duty to relieve pain and suffering where we safely can, as well as remove disease; but we are first to inquire whether, in so doing, we may not sacrifice a greater to a lesser good. Dr. Warren has very justly observed, that "there is no parity between the abolition of pain in surgical operations, and the abolition of the pains of labor, the former being only a part of that general law for preservation against injury, in consequence of which, whenever a foreign body threatens to impair the integrity of an organ, pain is produced, and the organ is instinctively withdrawn from the contact." While, therefore, there is nothing contrary to the laws of nature in the removal of pain from surgical operations, that which regulates the pains of labor is a general law, which cannot be changed by the power of science; its final cause being sufficiently plain to show its utility and necessity.* Dr. Warren thinks that the use of so powerful an application through the whole period of a natural labor would, in proportion to the term of that labor, increase the dangerous tendency to organic excitation; and, when this period is very protracted, it might bring on distressing derangements of the stomach, brain, spinal marrow, or uterus, besides in many cases suspending the uterine contractions. We agree with this distinguished surgeon in the opinion, that the cases in which ether can be properly resorted to in midwifery, should be considered as exceptions, such as, 1st. In a natural labor, when the pains are uncommonly severe, especially the terminating pains in a first parturition. 2d. During limited periods of labors prolonged by a preternatural cause. 3d. When, from the peculiarity of constitution, the patient cannot, without danger, support the usual amount of suffering. 4th. For the purpose of obtaining relaxation in irregular contractions of the uterus, as the hour-glass contraction after delivery.

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* "Etherization, with Surgical Remarks." By J. C. Warren, M. D. 1848. pp. 100.

The above remarks in relation to ether inhalation, will apply also to the use of chloroform. It is a far more powerful, and, therefore, deleterious agent, when improperly used, than ether, and the fatal cases arising from its employment have thus far been proportionally far more numerous. Composed of carbon and hydrogen, like ether, it contains, in addition, 3 eq. of chlorine, which render it still more sedative in its influence on the heart and circulation; and we feel no hesitation in predicting that it is not destined to occupy so prominent a position among anæsthetic agents as some have supposed. We have taken it, however, several times ourselves, and administered it in a few instances to others; and Professor Simpson, of Edinburgh, informs us, that he has given it in upward of fifty cases without any danger or unpleasant symptoms. Professor Walter Channing, of Boston, has also been very successful in its use. Still the fatal cases attending its employment, some of which are published in our present No., have been so numerous, as hardly to justify its extensive application to midwifery or surgical practice. We would say of this as of etherization, that notwithstanding what has been done, the profession at large would not be justified in generally employing them, in ordinary labor especially, until we have a more careful collection of cautious and accurate observations, and more precise information as to its effects, both on the uterus and the assistant abdominal muscles; its influence on the child, circumstances contra-indicating its use, and other matters connected with its operation. The propriety of resorting to either of these agents is a problem yet to be solved; we shall leave the solution to others, who have better opportunities or more zeal than ourselves.

As to the origin of etherization, we are happy to learn that the French Institute has recently awarded to the late Dr. Wells a premium of 25,000 francs for the discovery. Although he is now beyond the reach of praise or censure, we rejoice that justice will at least be done his memory, and that professional opinion is so unanimously awarding him the sole credit of introducing and establishing the existence of anæsthetic agents. We regret, however, to find our Boston friends still harping on the claims of Doctors Jackson and Morton, apparently entirely insensible to the fact, that in their mutual criminations and recriminations the latter have long ago met the fate of the celebrated Kilkenny cats. The profession are fully satisfied that Dr. Jackson has proved that Dr. Morton was not the discoverer, and that Dr. Morton has equally proved that Dr. Jackson is not the man. We would like exceedingly well to oblige our Boston friends in this matter, if we could conscientiously; but we cannot; let them remain satisfied with what they can justly claim, and not suppose that every new thing under the sun is a "Boston notion." Let us hear what Dr. Warren says on this subject:—"In this country, Dr. Horace Wells, of Connecticut, made many trials of this gas in 1844. In the autumn of that year he came to Boston, and in company with Dr. Morton visited me at the Medical College, for the purpose of requesting that the Medical class should have an opportunity of hearing some remarks on THE USE OF THE NITROUS OXIDE FOR THE PREVENTION OF PAIN. These remarks were actually made, and at a subsequent day a trial of the gas took place. But as I was very much occupied at the time, these occurrences made so little impression on my mind, that when, in the latter part of 1846, we were assailed in reference to Dr. Morton's first experiments, for a too great facility in adopting novelties, and the facts above mentioned were brought to corroborate the charge, I was for some time not able to understand the grounds of the attack. Dr. Wells, however, in the summer of 1847, mentioned to me circumstances which recalled to my mind his visit; and his statement was afterwards confirmed by that of Dr. Morton. Such are the facts within my knowledge of Dr. Wells' efforts to discover a mode of preventing or alleviating pain in surgical operations. It appears that he actually did prosecute his trials in Connecticut, and elsewhere, to such an extent that, when the matter was investigated by the legislature of the State in the winter of 1847, his labors were thought worthy of honorable notice. Dr. Marcy, of New-York, appears to have had communications with Dr. Wells on the inhalation of ether and of nitrous oxide; the result of which was, that he advised Dr. Wells to suspend the use of ether, and continue his trials with nitrous oxide. Whether these gentlemen had a knowledge of the proposal of Sir Humphrey Davy, we are not able to say."*

And yet Dr. W. claims for Boston the honor of the discovery. Now, let it be observed, that Dr. Wells has proved, that as early as 1844, he had performed more than 20 successful operations, while his patients were in an insensible state, under the influence of nitrous oxide and ETHER; that he communicated the discovery of this condition, and made known these facts to Drs. Morton, Warren, &c., in the fall of 1844, and actually delivered a lecture "*on the use of the nitrous oxide for the prevention of pain*, before Dr. Warren and his class at that time. In 1846, Drs. Morton and Jackson, the latter being the same gentleman who claims to have invented Morse's Magnetic Telegraph, obtained a patent from the United States for the discovery of the fact, about which Dr. Wells lectured before the physicians of Boston, in the fall of 1844, viz., the discovery of an agent "for the prevention of pain;" for the former state in their specification, (*Bost. Med. and Sur. Jour.*) that this is what they claim as their discovery! We cannot refrain from expressing our conviction that Dr. Wells has been very unfairly treated, and that the time has come for awarding him the justice he so richly merited. Is it unfair to suggest, or even unreasonable to conclude, that the tragical event which ended the labors of Dr. Wells, was induced, in a measure, by a consciousness of his own deserts, joined to an apparent unconsciousness of them by his professional brethren? It is, indeed, a saddening reflection, that, had his discoveries, to which others, who enjoyed his confidence, unjustly lay claim, been duly awarded him, and duly appreciated while he lived, he now might be among us, a valued and useful member. But so the world wags. Rarely is desert rewarded, or even acknowledged here; too often, as in this case, justice comes too late—and it is only when reward is useless and praise an empty sound, that the name of the *true* benefactor is heard. But from his ashes let the truth arise, and in this mournful instance, we can only say,

"PALMAM QUI MERUIT, FERAT!"

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* On Etherization, p. 86. 1848.

CHLOROFORM.—[*Translated from the Journal of Pharmacy of Paris, for the New-York Journal of Medicine.*]—In order to give France and a French physician due credit for this discovery, we will transmit the minutes of the *Academy of Science* of the 8th of March, 1845, page 342, where M. Flourens expresses himself as follows:

"It may be remembered that Chlorhydric ether gave me the same results as Sulphuric ether, and it induced me to experiment with the new product known under the name of *Chloroform.* The animals submitted to its influence were perfectly etherized in the space of a few minutes, (six in the first case, and four in the two subsequent ones.)

"The spinal cord was then laid bare, and the posterior branches were found to be perfectly insensible; and of five anterior branches, only two had retained the motory power, the others had lost it."

Thus M Flourens first made use of the Chloroform in experiments on animals; but to Mr. Simpson, of Edinburgh, is due the honor of being the first to make satisfactory experiments on *man.*

When the use of the vapors of ether were first introduced, the strong tenacious and unpleasant smell of sulphuric ether, the irritation of the bronchi, which it often occasioned during the first inhalation, the large quantity sometimes used to produce the desired effect, particularly in cases of protracted labor, etc., etc., induced Mr. Simpson to make an attempt to find a volatile liquid which should possess all the advantages of ether, and at the same time be free from the objections attending its use. In the course of his researches he examined several chemical products which he had selected on account of their pleasant odor; for those of our readers who might wish to pursue the same course, we will enumerate some of them: the chlorhydrate of the chloride of Acetyle, or *Dutch Cordial,* Acetone, Nitrous Ether, Benzin, Iodoform vapor, etc., etc., and lastly, *Chloroform,* which ought richly to repay him for all his labors.

It was through Mr. Waldie's advice that he was induced to study the properties of this last agent. Chloroform was discovered by Mr. Guthrie of this State, and by Soubeiran of France, in 1831, and described by Liebig in 1832. M. Dumas ascertained its composition in 1835, and some physicians prescribed it in small doses to be used internally, particularly as an antispasmodic in asthma.

Before publishing his discovery to the world, Mr. Simpson carefully observed the effects of this new agent in a number of different cases; such as the extraction of teeth, opening of abscesses, galvano acupuncture of encysted ovarian dropsy, parturition, and important surgical operations. He even gave it successfully in neuralgia, to allay the pain in dysmenorrhea. M. Dumas was fortunately in Edinburgh when Chloroform was first given in public to facilitate surgical operations, and he was exceedingly interested in observing the marvellous effects of an agent whose chemical history was so intimately connected with his own name.

The operations were performed at the Royal Infirmary of Edinburgh, and the following were among the number:

A child four or five years old, afflicted with necrosis of the radius, was the first submitted to the influence of the Chloroform. He could speak nothing but the Gaelic dialect, and when the handkerchief, wet with the liquid, was put near his mouth, he became very much alarmed, and even attempted to run away; but he had no sooner taken a few inspirations of the vapor, than he immediately stopped crying and kicking and fell fast asleep.

Prof. Miller then made his incision and extirpated the diseased radius by means of the forceps; during the operation and the probing of the wound, the child gave no signs whatsoever of pain, and was still sound asleep when carried to his bed. Half an hour after, he awoke as from a refreshing slumber, his eye was bright and lively, and his countenance calm and pleasant—a fact very rarely seen after the use of ether.

The next patient was a soldier, suffering from exfoliation of the inferior maxillary bone. The Chloroform was applied, and he was soon thrown into a state of insensibility. Prof. Miller then made a long incision across the lower jaw, and dissected up the integuments, which were very much indurated and firmly attached to the bone. The edges of the wound were brought into coaptation by means of several sutures. This man had previously undergone two similar operations, which had proved unsuccessful, on account of the manner in which he had borne them. On this occasion he did not give a single cry nor make a single complaint; he had slept most profoundly, and on awaking asserted that he had not felt anything at all; as he was coming to himself, he seized the sponge and carried it to his mouth, evidently showing that the process of inhalation had been far from being disagreeable. This case was particularly interesting, inasmuch as the ether, with its complicated mode of administration, could not have been employed, where it was necessary to make such an extensive wound of the cheek.

The third patient was a young man afflicted with necrosis of the bones of the big-toe and extensive ulceration of the integuments. It was so sensitive that he would scream and writhe on the least pressure. He was put under the effects of Chloroform, operated on, and awoke perfectly unconscious of what had transpired.

The whole quantity of Chloroform used for these three cases, was in all between three and four drachms, and Prof. Miller observed to the students, that it would have taken several ounces of ether to produce the same effects.

Mr. Simpson, after observing fifty cases where the Chloroform was used, came to the following conclusions:

1st. That a much less quantity of Chloroform than of ether will be required to produce the same effect; from 100 to 120 drops, and sometimes much less, being all that is necessary to effect insensibility.

2d. That its action is more immediate, more perfect, and more durable, from ten to twenty long inspirations being enough. The surgeon's time is not wasted, and the period of excitement, incident to all narcotics, is shortened, and the patient does not feel so much inclined to laugh and talk.

3d. That the quantity required is so small, that it is less expensive and more portable.

4th. That it is much more agreeable than ether. Its smell does not impregnate one's clothing, and it does not give rise to any eructations.

5th. That no complicated apparatus is necessary for its administration; a handkerchief, a sponge, or even a piece of paper, will answer the purpose perfectly well.

The purity of Chloroform may be tested as follows:

Take sulphuric acid at 66°.
Distilled water, equal parts, and mix.

This mixture, when cool, will show 40° by the "Areometer," (hydrometer.) One drop of *pure* Chloroform put in this liquid will sink to the bottom. This is a very cheap and easy test.—J. M.

THE MEDICAL PROFESSION IN THE STATE OF OHIO.—A recent residence of a few weeks in the capital of this flourishing State, has impressed us very favorably in relation to the present condition of the Medical Profession in Ohio, and satisfied us that it is making rapid strides in the march of improvement. Some forms of quackery have prevailed to a wide extent in many parts of the State, especially Thomsonianism, and Botanic Medicine, so called; but they are rapidly giving way as science and intelligence spread among the people, and the profession become better educated, and in a few years will be known only in name. Homœopathy has never gained a firm foothold in the State, and Hydropathy has fared no better. Its Medical Schools are all in a very flourishing condition, and a single individual, Mr. Lyne Starling, of Columbus, has recently made a donation of $30,000, to found a new Medical College in that city. The moral influence of such an act of generosity will, perhaps, accomplish as much good as the bequest itself. During the past Session, 240 students attended the school at Cleaveland, 140 at Columbus, and 170 at Cincinnati, making a total of nearly 600, a majority of whom belong to the State of Ohio, now the third in population and wealth, and soon to be the second in the Union.

Associations are forming among the medical men in different parts of the State, for the purpose of mutual improvement; a State Medical Society is organized, which meets at Columbus at stated periods, besides an annual convention of the Physicians of the State, which is also holden at the same place, and whose interesting proceedings are published yearly, and widely distributed. A difference of opinion, it is true, exists, in relation to the expediency of having a medical law for restraining quackery; though a large majority of the profession are opposed to any legislation on the subject. Numerous petitions, asking for such a law, were sent in to the Legislature, during its recent session, but the prayer of the petitioners was rejected, and that upon the unanimous recommendation of the committee to whom the matter was referred, who were all medical men.

Since the above was written, we have received the following abstract of the proceedings of the State Society at its late meeting, from the Secretary:

"At a meeting of the 'Ohio State Medical Society,' held in the city of Columbus, on the 11th and 12th inst.:

"Several gentlemen were admitted to membership.

"Drs. H. D. Childs of Massachusetts, and Charles A. Lee of New York, were elected honorary members.

"The principal business which occupied the attention of the Society, was in relation to legalizing the practice of medicine in this State.

"Letters were read communicating the views and wishes of individuals, and medical societies in other parts of the State, together with a draft of a law from Drs. Borstler and Krieder.

"After a very general expression of opinion, the Society declared it, in its opinion, 'inexpedient that any law of a general nature should be prayed for at present.'

"Drs. Landon, Carter, and J. B. Thompson, were, however, appointed a committee to meet and confer with the Senate and House Committees on Medical Colleges, &c., respecting the chartering of the State Medical Society, &c. &c.

"The report on the constitution and by-laws was recommitted to the same committee.

"Dr. R. Thompson was appointed to address the Society at its annual meeting in May next.

"Some other business having been transacted, the Society adjourned.

"F. Carter, Secretary.

"Columbus, January 21, 1848."

Professor Childs, on returning thanks for the honor conferred on him by the Society, delivered a very able extempore address; and among other observations, remarked in substance as follows: "Our country, above all others, is the theatre in which the fairest opportunity is presented for progress and improvement, with the surest prospect of success and reward. A world of mind is engaged in active effort, urged on by a freedom of thought and of action, which the old world feels not, shows not, and dares not allow. Our institutions are our own; and all feel they have an interest in sustaining, and elevating them still higher. Where all have equal rights, and there are no privileged orders, what a mine of intellect is opened to enrich and fertilize the land. Population, wealth, intelligence—these are not confined within the narrow limits of our large cities. Neither are the advantages of education enjoyed by the few, to the exclusion of the many. Schools, the higher seminaries of learning, and the Medical College, go with and follow the rapid spread of our population over the wide land. Ill-adapted as are European institutions to this free country, there are those who, without discrimination, would be content to follow on, in servile imitation, wherever an aristocracy of power and wealth exist; where the few lord it over the many, and the sons of the rich are the only educated men in the profession, the multitude are doomed to ignorance and poverty, deprived of the means of education, and the means of relief from suffering and from sickness. May the day be far distant, when all our physicians must be educated in our large cities! While the city medical institutions have many important advantages over the country medical schools, much might also be said of the advantages which the country, so-called, possesses, for the pursuit of medical learning. In the city or the country, the successful prosecution of medical science depends on the student himself; instructed and aided by competent teachers, he should be; but without effort on his part, the teachings of the ablest professors will avail but little. The peculiar character of medical science, though not less a science for its peculiarity, differs essentially from what are called the *certain sciences.* It may be said to require a knowledge of many sciences, and it is, in some sense, based on several distinct sciences. The pre-requisite qualifications for the attainment of medical science, is a minute knowledge of some, and a general knowledge of many branches of science. In truth, medicine embraces all other science. It is a science which makes all others tributary to its advancement. It is not sufficient that the physician understand well, anatomy, physiology, and chemistry; he may excel in any, and all the other sciences, and never make a good practitioner; while without them he can never have any just claim to the reputation of a scientific physician. We often meet with men of extensive reading, and such as deserve to be called learned men, who are yet destitute of professional talent. They lack the ability of advantageously using their knowledge; they are deficient in comprehensiveness of views, and incapable of grasping, at once, all the points of a case, and giving to each its due consideration, in forming a right judgment. This view of the subject was taken by Broussais, when, speaking of Louis' numerical system, he says, 'I opine, it requires something more than A plus B calculations, to constitute the scientific physician.' No system of medicine which does not include all known truth, and which does not admit all *new* discoveries, harmonizing all existing discordances, can be considered worthy of much credit. Again, no system of exclusiveness, limiting our resources, repudiating remedies of established reputation, can be right. All such systems can possess only a brief popularity in a free and intelligent community. The well-educated medical man need have no fear of the airy nothing of homœopathy, the steam of Thompson, or the hydropathy of Preisnitz. We can say of them all, 'what there is in them that is *true*, is not *new*, and what they call *new*, is not *true*.' The wide domain of medical science includes all that is valuable, in all, and every exclusive system. The skilful physician will avail himself of all improvements; appropriate all that is useful; and by his careful observation, daily add to the stock of his professional acquirements. His capabilities are increased by every case he thoroughly investigates; a single case, a *monograph*, well studied, is often of more value than the superficial observation of hospital practice, however much the advantages are extolled.

The distinguishing characteristics of our highly-favored country, are its civil, religious, and educational institutions; all based on the equality of rights, belonging to each individual, and fixing the sovereignty in the whole people; thus making public sentiment, variously expressed, the governing power of the nation. To this umpire all questions must be submitted, and by this authority, all decisions must be made. The professional man, not less than the politician, must yield implicit obedience to its mandates. We all have a deep interest in enlightening the public mind on the subject of medical science, for by it our professional standing will be mainly determined. Public sentiment has already pronounced against legislative interference in prescribing the qualifications for admission to practice, or assuming any responsibility, by government patronage. The profession are now thrown upon their own responsibility, and their own resources; and, all things considered, this is probably the wisest policy, and will prove advantageous to all concerned.

Thus situated, two important considerations are suggested, of deep interest, and of great practical importance. 1st, the best means of promoting a right public sentiment, as regards the profession; and 2d, the best means of improving and elevating the science of medicine.

The first object will be best acccomplished by the general diffusion of knowledge, and the prevalence of correct moral principle. The means and the facilities of educating the rising generation are abundant, and may be used with an energy and success which the world never before enjoyed. The light of the sun of science shines with a sevenfold splendor. The 19th century opened with new and important discoveries, and has not ceased to astonish mankind with the wonders of science and art. Improvement, progress, reform, are the watch-words of the times; the right spirit prevails; and who can set bounds to its influence? It pervades all the departments of life, and no human foresight can anticipate its conquests. Largely does the profession of medicine participate in its triumphs. Higher and more honorable will be its character, as the necessary consequence. The mean and grovelling spirit which has so long pandered to vice and ignorance, degrading the profession, will soon find no place in our land. Our intelligent community will demand intelligent physicians; education will dissolve the clouds of ignorance and prejudice which have hung over the minds of the community, and the people will scout the mysteries and the pretensions of the impudent quack. A good and sufficient reason will be required for the exercise of faith and confidence in the skill of any one who bears the honorable title of DOCTOR.

Besides the deep interest physicians have in the spread of knowledge, and a well-informed community, the profession has still higher claims on its members to devote their best energies to its improvement. This is, emphatically, the highest duty of all who are engaged in the study or practice of medicine; and it is more especially imperative in the American physician, who, unaided by authoritative action, assumes the guardianship of the profession.

The country is waking up to this high responsibility, and all begin to see and feel that success mainly depends on the right use of the advantages now enjoyed, and a great increase of those advantages, that higher attainments in medical science may be made, progress and improvement encouraged, so that the profession may be elevated to the highest degree of which it is susceptible; thus giving to it all the importance to which it is entitled, and gaining for it an influence which the circumstances of the times so imperiously demand. Association, union, and concert of action, enter largely into the schemes of the friends of medical improvement. Much of valuable information in the profession has been lost to the world, for the want of free and frequent intercommunication between medical men; for the want of this, discord and variance have prevailed where all should be harmony and peace. An interchange of sentiment in the profession of medicine, more than in any other, has a direct tendency to enlighten, to harmonize, and perpetuate the right feeling, and the right action. Associations for mutual improvement should begin in the school, and be continued during the active duties of professional life. However much we value a good medical library, it is no substitute for the benefits of oral discussions, and the *viva voce* communications of what we hear and of what we know. Medical associations may be formed of small or large numbers; they should be both. They should embrace all of the *regular* practitioners, and they should be so managed as to make it for the interest of all to unite and become members. In state and national associations the principle of representation should be adopted, by delegates, constituting the association. The principle of association, thus carried out, gives to neighboring physicians an intimate acquaintance with each other, and those more widely separated, a general knowledge of the members of the profession, and to all a fellow-feeling of interest in all, which cannot but promote harmony, diffuse light, and contribute largely to the welfare and prosperity of the faculty.

"*The American Medical Association*" is well calculated to advance the great interests of the profession; concentrating, as it does, the wisdom of distinguished medical men, convened from every part of our highly-favored country, it will exert a benign influence over all. And notwithstanding the acts of the association will be principally recommendatory, with no legal authority to enforce them, yet, speaking the sentiments of a strong and powerful body of men, their voice will be listened to with the highest respect. From this 'National Association' will emanate general plans for elevating the profession, enlightening public sentiment, and promoting harmony of intercourse and friendly feeling among those who should be brethren. The organization of this society was loudly called for by the circumstances of the times, and of the country; and for its support, every intelligent physician should enlist."

Professor Childs extended his remarks to a much greater length, giving a detailed account of the organization of the Massachusetts State Medical Society, and the attempts now making to introduce some salutary changes in its organization and management, and closed by again expressing his obligations for the honor conferred. Dr. Thompson, President of the society, responded in a happy manner, expressing his concurrence in the sentiments of Professor C., and congratulated the society on its prosperity.

Recent Promotions, Resignations, Deaths, etc., in the Medical Corps of the United States Army.—*Promotions.* William P. Dean, of Louisiana, to be Surgeon, August 21, 1847, vice Ravanel, declined. Robert McNeal, of Ohio, (Assistant Surgeon,) to be Surgeon, September 3, 1847 vice Stone, discharged. James S. Athon, of Indiana, to be Surgeon, September 8, 1847.—(Re-appointed.) John N. Esselman, of Tennessee, to be Surgeon, September 8, 1847, vice McKnight, discharged. Nathan Gaither, of Kentucky, to be Surgeon, September 8, 1847, vice Holland, discharged. Joseph G. Roberts, of Kentucky, to be Surgeon, September 8, 1847, vice Caldwell, discharged. James P. Evans, of Tennessee, to be Surgeon, September 28, 1847, vice Washington, discharged. John Irwin, of Tennessee, to be Surgeon, September 28, 1847, vice Esselman, declined. Samuel B. Fields, of Kentucky, to be Surgeon, October 8, 1847, vice Gaither, declined. Minor B. Halstead, of New York, (Assistant Surgeon,) to be Surgeon, October 20, 1847, vice Hasbrouck, resigned. J. G. M. Ramsey, of Tennessee, to be Surgeon, October 30, 1847, vice Mahon, discharged. Adrian R. Terry, of Michigan, to be Surgeon, October 30, 1847, vice Hensley, discharged. John Parshall, of Tennessee, to be Assistant Surgeon, November 1, 1847, vice Hale, resigned; and to be Surgeon, November 16, 1847, vice Ramsey, declined. Alexander M. Cassidy, of Pennsylvania, to be Assistant Surgeon, August 9, 1847, vice C. J. Clark, appointed Surgeon. William Treadwell, of Florida, to be Assistant Surgeon, August 25, 1847, vice Glenn, resigned. Oliver M. Langdon, of Ohio, to be Assistant Surgeon, September 3, 1847, vice McNeil, appointed Surgeon. William Fosdick, of Indiana, to be Assistant Surgeon, September 8, 1847.—(Re-appointed.) Alexander M. Blanton, of Kentucky, to be Assistant Surgeon, September 8, 1847.—(Re-appointed.) James P. Bozeman, of Georgia, to be Assistant Surgeon, September 8, 1847, vice Ashe, discharged. James D. Caulfield, of Mississippi, to be Assistant Surgeon, September 8, 1847, vice Heighway, discharged. Hugh R. Rutledge, of South Carolina, to be Assistant Surgeon, September 10, 1847, vice Dunn, resigned. George T. McDonald, of Ohio, to be Assistant Surgeon, September 13, 1847, vice Mulvaney discharged. John R. Steele, of Kentucky, to be Assistant Surgeon, September 13, 1847, vice Mathews, discharged. Joseph Malin, of Missouri, to be Assistant Surgeon, September 17, 1847, vice Sanderson, resigned. Philip G. Jones, of Indiana, to be Assistant Surgeon, September 22, 1847, vice Fosdick, discharged. Richard W. Gardner, of Tennessee, to be Assistant Surgeon, September 28, 1847, vice Dorris, resigned. William Cromwell, of Kentucky, to be Assistant Surgeon, September 28, 1847, vice Blanton, declined. William A. Russell, of Tennessee, to be Assistant Surgeon, October 19, 1847, vice Stout, resigned. John G. McKibben, of New-York, to be Assistant Surgeon, October 20, 1847, vice Halstead, appointed Surgeon. Henry Lemcke, of Michigan, to be Assistant Surgeon, October 30, 1847, vice Leech, discharged. Washington L. Lyon, of Tennessee, to be Assistant Surgeon, November 16, 1847, vice Parshall, declined. Eliathah S. Gale, of ———, to be Assistant Surgeon, December 2, 1847, vice Treadwell, deceased. Assistant Surgeon William Hammond, to be Surgeon, August 7, 1847, vice Hawkins, deceased.

Resignations—Volunteer Service. Surgeon E. K. Chamberlin, Oct. 25, 1847. Surgeon J. L. Hasbrouck, October 19, 1847. Assistant Surgeon John G. Dunn, August 19, 1847. Assistant Surgeon George B. Sanderson, August 31, 1847. Surgeon Edmond Ravanel. *Regular Service.*—Assistant Surgeon Robert S. Holmes, October 4, 1847. Assistant Surgeon James D. Stuart, 16th Infantry, November 6, 1847.

Declined.—Surgeon John N. Esselman. Surgeon Nathaniel Gaither. Surgeon William P. Dean. Surgeon Samuel B. Fields. Surgeon J. G. M. Ramsey. Assistant Surgeon Craven Peyton. Assistant Surgeon Alexander M. Blanton. John Parshall, of Tennessee, as Assistant Surgeon.

Deaths.—Hamilton S. Hawkins, at Tampico, August 7, 1847. * Assistant Surgeon William Roberts, Mexico, October 13, 1847. Assistant Surgeon Robert C. Wickham, at Vera Cruz, May 13, 1847. Assistant Surgeon Robert H. McGinnis, 14th Infantry, Vera Cruz, September 1, 1847. Assistant Surgeon William Treadwell, at Vera Cruz, October 24, 1847.

Discharged.—Assistant Surgeon William Fosdick, September 22, 1847.

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* From wounds received in battle of Molino del Rey.

Brooklyn City Hospital.—We have received the report of the Board of Trustees of this proposed Institution, which was submitted at a public meeting held on the 1st Feb. 1848.

An act for incorporating the Brooklyn City Hospital, passed the Legislature of this State on the 8th May, 1845; since which time, measures have been in progress for carrying the benevolent design into operation. A building site, favorably located near the contemplated park at Fort Greene, had been obtained, and collections are now being made for the erection of the necessary buildings. We regret to learn, however, that the active exertions of a few benevolent spirits are not more worthily seconded by the inhabitants of our sister city. It seems that some $2,000 have been expended in the purchase of 14 lots of ground, $3,392 in the house and furniture, now temporarily used for hospital purposes; and $5,500, the donation of a single individual, include all the resources thus far invested for this great and benevolent object.

We are told in the report, that "a similar apathy has characterized the various annual meetings of the Association for the Relief of the Poor," that the "City Library slumbers in its quietude almost unknown;" that the City Observatory is now passing through its second struggle; while the Orphan Asylum and Institute owe their life and influence mainly to the labors and benefactions of a few." Brooklyn has been called the "City of Churches;" the report mildly hints that "faith, without works, is dead." "Contrasted with other places," it adds, "Brooklyn has not done that for herself which should most exalt her. Rejecting the vices of the parent city in many a form, she has still to imitate her many virtues. Young in years, and full of vigor, she will yet put on her crowning ornaments. As the spirit of selfishness is rebuked, her City Hospital and kindred Institutions will grow up, enlisting the sympathies and aid of those who have retired from the busy walks of life, and seek that exercise of their generous emotions which otherwise is denied them. In the furtherance of this, and similar charities, will be realized the truth of the Scripture—'it is more blessed to give than to receive.'"

The *Attending Physicians* of the Institution are, H. J. Cullen, M. D., P. Cook, M. D., Lucius Hyde, M. D., R. McClellan, M. D., C. L. Mitchill, M. D.

Attending Surgeons.—T. L. Mason, M. D., F. W. Hurd, M. D., W. G. Hunt, M. D., Daniel Ayres, M. D.

Resident Physician.—William Swift, M. D.

The Mississippi State Medical Society.—The Society held its Annual Meeting at Jackson, on the 11th of January.

Dr. S. A. Cartwright was unanimously re-elected president. Drs. Keirn, Copes, and J. W. Philips, were elected to represent the Society, at the next meeting of the American Medical Association, to be holden in Baltimore, on the first Tuesday of May next. Other important business was transacted, and measures adopted, which show that the Society is entirely engaged in promoting the interests of Medical Science, and helping forward the great work of medical reform.

Three cases of double vagina.—In the Medical Examiner for Dec., Prof. Meigs has reported three cases of double vagina, complicating pregnancy. They were all cases of primapara. The first a remarkably well-formed and comely woman, æt. 20 years. Upon making an examination, Dr. M. found the os uteri dilated to the size of a half dollar, which in the course of an hour became fully dilated; when, upon repeating the examination, he found that the head rested upon a bridle, extending from the anterior to the posterior columna of the vagina, which would not admit the dilatation of the lower or outer third of the vagina. The first idea suggested by this condition of things was, that a rupture of the cervix had taken place; but upon further examination of the external organs there were found two distinct vaginas each perfect and alike, included within labia pudendi common to both.—The head, in its descent, could not be made to take either the right or left passage. Dr. M., fearing rupture of the vagina, (the pains being so strong,) with a strong pair of scissors divided the wall by a single stroke of the instrument—the head advanced—dilated the os magnum, and the child was speedily delivered.—No unpleasant symptom followed.

In the second case—patient æt. 30 years—upon making the first examination, the os uteri was found dilated to the size of a quarter of a dollar, with thin margins, and within it the penis and scrotum of the child were felt preenting. After waiting an hour, the os uteri was much dilated, and the buttock and right foot of the child presented. Upon close examination, the same condition of parts as in the first case was found. The same idea suggested itself to Dr. M., viz., that a rupture of the cervix had taken place. The wall was very firm and thick, extending from the os magnum almost up to the os tincæ—the same structure of the external parts existed as in the first case, but then there was the fear that both feet would descend, one entering the right, and the other the left vagina. This, however, did not take place. Dr. M. disengaged the right foot and brought it down the right channel; the left was flexed upon the belly and thorax of the fœtus. With a little caution the leg and trunk were delivered. Much difficulty was encountered in the delivery of the head; it remained long in the vagina, the infant breathing from time to time the air that (Dr. M.) admitted through the hollow of his hand and fingers to its mouth and nostrils.—The child was born alive—the mother speedily recovered. Dr. M. makes mention of being called, some years ago, to a similar case, which occurred in the practice of the late Dr. Ruan. This too was in a primaparia—the child was finally delivered by the forceps through the right vagina. No unpleasant symptom followed delivery.—(Ed. *ad inter.*)

A CASE OF SUPPOSED SUPERFŒTATION. By HENRY WILLSHER, M. R. C. S. London, and Member of the Medical Society of Kings County, L. I.

Mrs. L., residing at Brooklyn, L. I. desired my attendance at her accouchement. Symptoms of labor commenced January 18th, about three o'clock, p. m., progressed satisfactorily, and terminated at nine—expulsion of the child (a boy, well proportioned, weighing five pounds and a half, and continues a healthy child) had taken place previous to my arrival; and, whilst applying ligatures on the funis, the secundines were expelled. After separating the child, I took the secundines in my hand, for removal, and feeling something unusual, on examination found it to be a fœtus seven inches long and of the male sex. On inquiry of the patient if she had noticed anything particular during this gestation differing from her former two, she said, that about ten weeks since she felt morning sickness, similar to that she used to feel for the first three months; that this morning sickness continued for several days, and then ceased; and that her usual state of health was not dissimilar to what she usually experienced.

University of the City of New York.—The Annual Commencement of the Medical Department of the New York University, was held at the University Chapel, on the evening of the 8th of March inst. The degree of M. D. was conferred by the Chancellor of the University, Hon. Theo. Frelinghuysen, Esq. on the following gentlemen:

D. C. Ayres, Indiana; J. A. Agnew, Virginia; B. B. Aycrigg, New Jersey; W. D. Aylett, Alabama; B. J. Baldwin, Georgia; E. W. H. Beck, Iowa; E. P. Bailey, New York; J. H. H. Burge, Rhode Island; H. Burgess, Connecticut; W. W. Blackman, New York; J. B. Black, Pennsylvania; R. T. Bryan, Kentucky; D. R. Bardin, New York; C. L. Barnes, Georgia; H. N. Bushnell, New York; A. Bethune, North Carolina; H. W. Brown, Georgia; W. Bullions, New York; J. Bishop, New York; A. T. Bull, New York; W. A. Bernard, North Carolina; G. G. Bird, Georgia; James Buchanan, Ohio; M. B. Cargile, Georgia; Silas S. Clark, New York;

L. W. Curtis, New York; H. Chappell, South Carolina; A. S. Clark, New Jersey; S. W. Clark, Connecticut; J. W. Crawford, Pennsylvania; R. L. Crawford, South Carolina; C. N. Campbell, New York; J. H. Cox, Alabama; W. F. Demming, New York; J. Dickson, Pennsylvania; W. H. Dial, Texas; T. J. Dozier, South Carolina; H. Dillard, Virginia; E. Edmundson, Tennessee; J. T. Edwards, New York; D. C. Edmonston, New York; G. F. Foote, New York; E. Flint, Rhode Island; Thomas Frye, Arkansas; W. W. Flewellen, Georgia; D. Farrar, Canada; E. Ford, New York; T. T. Fitzhugh, Virginia; T. W. Frame, New York; C. R. Gallagher, Delaware; J. M. Gastion, Indiana; J. L. Grisham, Georgia; R. A. Greer, North Carolina; L. L. Graves, Georgia; D. Hasbrouck, New York; H. B. C. Harris, Virginia; W. A. Hammond, Pennsylvania; — Hutchings, Virginia; W. W. Harper, Louisiana; S. M. Higgins, N.York; J. F. Huntley, New York; G. L. Hutchinson, Alabama; M. Hinman, New York; J. F. Hawkins, Georgia; J. B. Herron, Pennsylvania; C. E. Hammond Connecticut; — Holbrook, Massachusetts; J. A. Hudnall, Virginia; Charles Henry, South Carolina; J. J. Hammill, Pennsylvania; L. L. Holmes, North Carolina; A. Hallet, New Brunswick; J. C. Hightower, Georgia; W. G. Hatch, Wisconsin; J. J. C. Hall, North Carolina; P. T. Henry, North Carolina; G. S. Little, New York; S. Lasseter, South Carolina; W. J. Lytle, New Jersey; C. G. McKnight, Rhode Island; E. A. Martin, South Carolina; G. D. Moore, North Carolina; C. W. McMichel, Georgia; J. W. McCabe, Pennsylvania; R. G. W. Maffett, Georgia; R. Mathison, New York; M. H. Moragni, South Carolina; W. P. Massey, New York; A. D. Moore, North Carolina; F. A. Milner, Georgia; G. T. Maxwell, Florida; H. McNeil, North Carolina; M. Mattson, Massachusetts; D. A. Neilson, Tennessee; J. H. Olmstead, Pennsylvania; J. G. Ogden, New York; M. N. B. Outlaw, Georgia; C. Perkins, Tennessee; E. H. Pentz, Pennsylvania; G. W. Peer, Michigan; B. C. Rowan, Indiana; I. D. Ray, Kentucky; D. Reed, Pennsylvania; M. Ransom, Tennessee; D. J. Ransom, do; J. C. Roberts, Alabama; F. A. Stanford, Georgia; S. Schoonmaker, New York; H. K. Steele, Ohio; H. W. Smith, do; W. H. Schenck, New Jersey; J. C. Sill, New York; Joseph Sill, do; T. B. Small, New Jersey; J. R. Slaughter, Alabama; F. Snell, New York; P. Ten Eyck, New Jersey; J. Trussdell, New York; J. C. Tappan, do; C. J. Taylor, Tennessee; T. S. Tuggle, Georgia; W. Wallen, Florida; A. Wetmore, New York; A. W. Williams, Georgia; T. C. White, Tennessee; R. S. Wright, New York; P. A. White, Georgia—127 in all.

College of Physicians and Surgeons of the University of the State of New York.—The Annual Commencement of this Institution was held on the evening of 9th March, inst., at the College Hall, No. 67 Crosby street. The degree of M. D. was conferred by the President, Dr. A. H. Stevens, upon the following young gentlemen:

Henry Dawes Appleton, Maryland; John Babcock Arden, A. M., New York city; John Hiram Bacon, Jefferson county, New York; Richard Aaron Barnes, Dutchess county, New York; Samuel Cyrus Breitenbach, Pennsylvania; Charles Wesley Brink, New York city; John Roberts Burton, Georgia; Josiah Cadmus, New Jersey; William Wert Cahoon, A. B., Vermont; Matthew Joseph Callaghan, A. B., New York city; Richard G. Cobb, North Carolina; Austin Barton Conkling, Long Island, N. Y.; John Richard Conway, New York city; Whitfield Stephen Coursen, New Jersey; Greenlief Dearborn Dagget, Maine; Nathaniel Reynolds Davis, New York city; Charles Bolivar Dayton, Long Island, N. Y.; William Blahie Eager, Jr., Orange county, N. Y.; John Fellows Ely, Michigan; Leonard Carpenter Green, Dutchess county, N. Y.; Joseph Sherwood Gregory, A. B., New York city; George Osgood Gunn, New York city; Hampton Harriott, A. M., New York city; Alfred Hasbrouck, A. M., Ulster county, N. Y.; Charles Rollin Head, Wisconsin; Lucien Hensley, Kentucky; Richard Seldener Jacobson, New York city; William Louis Jones,

A. B., Georgia; William Kelly, A. M., New York city; Daniel Embury Kissam, Long Island, N. Y.; John Preston Leonard, Rhode Island; Stephen Kearney Turquand Mackay, Canada East; Ira Manly, Jr., Essex county, N. Y.; James Lewis Manney, North Carolina; Benjamin Reese Masters, Bermuda; Joseph King Merritt, A. M., Westchester county, New York; William Bowne Minturn, A. B., New York city; Stephen Moses Miller, Rhode Island; Israel Parsons, Onondaga county, N. Y.; Adoniram Judson Rand, New York city; Austin Ledyard Sands, Jr., A. M., New York city; John Peter Sharer, Herkimer county, N. Y.; Jonathan Chamberlain Shattuck, A. B., Long Island, N. Y.; Charles William Shumway, Essex county, N. Y.; Truman Hoffman Squire, Herkimer county, N. Y.; Harvey Putnam Tolman, Onondaga county, N. Y.; William Columbus Walker, Georgia; Zephania Swift Webb, Connecticut; Henry Astor Weeks, A. M., New York city; Charles Whipple Whiley, A. B., New York city; John Martin Witherwax, Iowa; Aurin Nelson Woodman, Massachusetts.

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Foreign Medical Intelligence.

ANATOMY AND PHYSIOLOGY.

Nerves of Bone.—M. Gros has obtained some interesting particulars regarding the distribution of nerves to the long bones. Taking the femur of the horse as sufficiently typical of the ordinary plan, he finds at least three nerves to approach the nutrient foramen—two of them in company with the branch of the femoral artery, called by M. Gros "diaphysial," and the third, occasionally double, by piercing the vastus internus muscle. All of these are branches of the crural nerve, but there is in man, it seems, a branch of the sciatic in addition. Arrived at the nutrient foramen, the nerves are disposed differently in some subjects, but commonly a ganglion is developed, which receives the nervous branch which came through the muscle at one end, and one of the satellites of the artery at an interval. One portion of the ganglion is somewhat distinct, and is situated within the foramen; it gives two branches which receive the other arterial satellite, (which is distinct from the ganglion,) and then penetrates the medullary canal. The rest of the ganglion lies beneath the periosteal artery, which it is to be noted is a branch of the diaphysial, whose other branch is medullary, and supplies two satellite nerves to it. Variety occurs in the ganglion as to situation, it being near to or more remote from the foramen, and as to form, it being occasionally double. The branches, both medullary and periosteal, follow, and ramify with the arteries, forming a network corresponding to the vascular, and the purpose of the ganglia appears to be to assemble, previons to this distribution, the nerves from several sources.—*Archives Gén. de Médicine.*

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The Optic Thalami.—In a series of experiments upon rabbits, made after the publication of his essay "De vi motoria baseos encephali," Dr. Schriff observed the following consequences of injury to the optic thalami, etc. 1st. The lower parts of the optic thalami, and the whole thickness of the crura cerebri are slightly sensitive. 2d. If one thalamus or one crus cerebri be destroyed, a rotation around the transverse axis of the body takes place. This movement is not due to a hemiplegia of the opposite side, for it takes place even when the action of one of the extremities of the injured side is prevented. 3d. The injury of any part of the hemisphere above the thalamns produces no such rolling movement. 4th. The change from the rotatory movement to the rolling movement is observed only when, in conseqnence of the operation, the lateral part of the pons is compressed. 5th. The rotatory movement depends on a deviation of the two forefeet towards the side opposite to the direction of the rotation, combined with a movement of the neck *towards* the direction of rotation. 6th. These deviations occur only in movements effected through the brain, they are never spasmodic. 7th. The anterior three-fourths of each thalamus unite in themselves the elements for the flexion of the body to the opposite side. When the portion of the thalamus included within this anterior portion is destroyed, the rotatory movement toward the injured side ensues in the way described above. 8th. But if the posterior fourth of a thalamus, or if a crus cerebri be destroyed, the deviation of the feet and of the neck will have the opposite direction, and the movement will be towards the side opposite the injured thalamus, in just the same manner as when the anterior part of the other thalamus is injured. 9th. There appears, therefore, to be a decussation of the fibres in relation with these movements, between the thalamus and the crus cerebri, which decussation probably takes place in a part lying above and behind the corpora albicantia, and reckoned as belonging to the substantia perforata media. 10th. The destruction of no azygos part of the brain above or before this portion of the middle line produces any paralysis of the extremities; but the median division of the floor of the fourth ventricle produces excitement of motion. 11th. If, in dividing the crus cerebri, the pons be injured, a partial paralysis of the hind foot, on the side opposite the injury, is added to the other deviations; and the movement takes the form of a rotation around the paralyzed foot, the whole body moving as the radius. 12th. Immediately after the destruction of an optic thalamus, or a crus cerebri, a few rotations are made *towards* the injured side—the effect, probably, of the irritation—they soon give place to the ruling movement. 13th. The part, irritation of which makes rabbits snarl and dogs howl, is anterior to the thalamus, in the neighborhood of the anterior crura of the fornix. 14th. The rotation takes place in animals blinded by the removal of the humors of the eyes.—*Schmidt, Jahrb. Heft.*, 7, 1847.

SURGERY.

Fractures of the Radius.—We now come to fractures of the lower extremity of the radius. This subject is still new, and has scarcely been noticed till within the last thirty years. Boyer makes no allusion to it. Till 1812 or 1815, these fractures had been confounded with dislocations of the radiocarpal articulation; and notwithstanding the clearness of the memoirs since written on the subject, many practitioners continue to do so. This arises from the peculiar deformity of the wrist, which resembles a dislocation, and which I have endeavored to describe by a letter which represents it sufficiently clearly. The fracture of the radius causes the wrist to assume the form of the letter Z. The part may also be compared to a silver fork; the dorsal surface of the wrist and hand, instead of being on the same plane with the posterior surface of the forearm, is more prominent, while the palmar surface of the forearm presents an opposite appearance; instead of a concavity, its lower part presents a marked convexity, closely resembling the back of a fork, of which (to carry out the simile) the fingers represent the prongs. The absence of this deformity does not make it certain that there is no fracture, but when present it is altogether characteristic; if there is any difficulty in making it out on examining the injured limb alone, comparison with the sound one will at once remove it; and this is the more important because other symptoms of fracture, such as crepitus and undue mobility of the bone, are either very obscure or altogether wanting. Another symptom, which is also of value, is the raising of the tendons of the external radial muscles: these in their normal state lie close to the bone; but when that is displaced, and, as we may say, increased in size by the anterior projection, there is an increased stretch and tension of these muscles, and particularly of their tendons. If there is anything else remarkable about fractures of the extremity of the radius, it is the little inconvenience they produce; they unite readily when left to themselves, and the patients often complain more of the apparatus than of the fracture. This is explained by the head of the bone being surrounded by numerous tendons, which act as so many splints. The only deformity that remains after consolidation, is a projection at the lower part of the arm, which is trifling in amount, and only perceptible to the eye of a surgeon. The movements of the joint are in no degree impaired. There is, however, an exception to this, if the fracture is deeply impacted or much comminuted, and then a very exact and effective apparatus should be applied. Those that act by a strong compression on the injured part produce a hardening and thickening of the tendons and synovial membranes, which may end in partial anchylosis of the wrist and fingers.

The following is the apparatus I employ. I surround the limb with a dry roller; having reduced the displacement, I apply a starch bandage, graduated compresses, and pasteboard splints on the dorsal and palmar surfaces of the forearm and hand. While it is drying, I apply wooden splints. In twenty days, consolidation takes place, and the cure is complete in a month. —*Dublin Medical Press.*

Case of Tumor of the Neck, simulating Aneurism of the Carotid Artery. By James Syme, Esq., Professor of Clinical Surgery in the University of Edinburgh.—About a month ago a young man called upon me to get my opinion of a swelling in his neck. It was seated on the right side, and occupied the upper triangular space. It was of an oval form, quite circumscribed, and obviously consisted of a bag containing fluid. Upon more particular examination, I found a distinct pulsation of the kind which I had been accustomed to regard as characteristic of aneurism, being an expansive impulse, not limited to a portion of the tumor, but felt equally at every accessible point, even from the mouth, and more especially in a lateral direction. The patient stated that the swelling had commenced in the beginning of the present year—that is, about nine months ago—and had progressively enlarged without any cause that had been ascertained. He also stated, that when he worked hard or walked fast, the tumor increased in size, and had a strong beating in it. I felt satisfied that there was an aneurism of the carotid artery, but expressed no opinion at the time, and desired the patient to call again for further examination. When he did so, I varied the process by placing him in different positions—by trying the effect of pressure on the tumor and artery—and by listening to the sounds of the tumor. There was no distinct aneurismal "bruit," but a very strong, loud pulsation, that implied the action of the heart upon an extensive surface. Finding my impression thus confirmed, I informed the patient of my apprehension; but, before giving a decided opinion, requested that he would call once more. He did so a few days afterwards, and I then felt fully warranted to inform him that an operation would be requisite for his relief. Next day he placed himself in my hands for this purpose, and was admitted into the Minto House private hospital. After he had been confined to bed for a few days, I tied the artery below the crossing of the omo-hyoideus, as the tumor prevented this from being done higher up. The textures of the neck were more than usually adherent, and the vessel was not exposed to view with nearly the same facility as upon the former occasions which have required me to perform the operation. I nevertheless succeeded without any tearing, or undue disturbance of the parts, in passing and tying the ligature, so as to relieve me from the slightest apprehension of any bad consequences. The tumor immediately sustained a very distinct diminution of bulk, which was remarked not only by the gentlemen present, but by the patient. He went on most favorably after the operation until the fifth day, when hemorrhage took place from the wound, and notwithstanding every effort to effect prevention, recurred from time to time until the evening of the twelfth day, when it proved fatal.

The parts concerned were examined next day in the presence of Drs. Scott, Duncan, Mackenzie, Peddie, Brown, Gillespie, and Ballingall. We found a tumor extending from the ear to the extremity of the omo-hyoideus, and completely occupying the upper triangular space of the neck. At the lower part it seemed to terminate in the sheath of the vessels, which looked like a prolongation of it downwards, but was found to be merely enveloped by the bag, which I dissected out entire from the coats of the vessels to which it had intimately adhered. The cyst, when opened, was found to possess a tough consistence, and to contain a fluid like thin gruel. At the posterior part, when viewed internally, it displayed a sacculated or honey-comb-looking structure.

I have deemed it right to communicate this case to the society without delay; in the first place, because the names of several gentlemen have been mentioned in connexion with its previous treatment, and it is but due to them that the true state of matters should be made known. And secondly, because I wish to discharge the duty which devolves upon every member of the profession who is so unfortunate as to commit a serious error of practice, by faithfully stating the circumstances which misled me, so that they may be rendered less likely to cause similar mistakes in future.

I have had extensive opportunities of observing tumors of an aneurismal kind, and it was impossible for me to bestow more care in any instance than in the case just related. But it appears that the character which I have hitherto regarded as the most certain indication of aneurism, may be presented by a peculiar state of things of an entirely different kind. I allude to the general expansive pulsation, especially when felt in a lateral direction. This was most distinctly recognised not only by myself, but by several gentlemen well practised in the diagnosis of aneurismal tumors, who, in consequence, agreed with me in believing that an aneurism existed. Having come to this conclusion, and being requested by the patient to do what seemed requisite for his relief, I had no course but to tie the artery. The low situation to which the ligature was restricted, with the consequent proximity of the innominata, and the intimate adhesion of parts, no doubt led to the hemorrhage.

The painful feelings excited by such an occurrence, are on the present occasion somewhat relieved by the reflection that I did not err from any want of care, and that I proceeded on the ground of my most deliberate judgment, in accordance with what I believed to be a well-established principle of surgical diagnosis. I also derive comfort from the persuasion that a fatal issue must, sooner or later, have resulted from the case, whether it had been left to itself, or been subjected to surgical treatment. It is plain, that no sort of external application or internal remedy could have had any beneficial effect on the tumor. The patient had used liniments and blisters, and taken large quantities of cod liver oil, under the impression, I suppose, that the swelling depended upon an abscess; but with no check to the enlargement, which had progressively increased with accelerating rapidity. In such cases I have repeatedly dissected out the cyst, and did so with success upon one occasion in the hospital, where the tumor extended from the mastoid process to the clavicle. But in the present instance, it would have been impossible to effect removal in the living body, since it was only by cutting, without regard to the integrity of the great vessels, that the bag was separated in an entire state from their coats. The only remaining mode of procedure, therefore, was to lay the sac freely open, so as to induce suppuration and granulating contraction of the cavity. The last case of the kind that occurred in my practice was treated in this way, as Dr. Richard Mackenzie, who assisted me, may remember. It is between two and three months since the operation was performed, by removing the anterior or superficial part of the cyst; and the patient is now nearly, if not quite well. But it is well known that when a large artery lies in close proximity to the suppurating surface of a sinus or open cavity, ulcerative absorption of the septum between them is apt to occur, and occasion hemorrhage. I was asked by Dr. Douglass to see a man under his care in the hospital last winter, on the lower part of whose neck, and upper part of the sternum, a large swelling had taken place. In laying my hand upon it, I felt a strong pulsation, which ceased during inspiration; and I therefore concluded that the tumor proceeded not from an aneurism, but an abscess. As there was a blush on the most prominent part of the swelling, and as the patient did not seem to suffer any particular inconvenience from its presence, I advised that the matter should be allowed to find vent spontaneously—since it seemed very probable that, after evacuation was accomplished, ulceration of the arterial coats adjoining to the cavity would ensue. In the course of a few days the matter was discharged by the natural process, and a few days afterwards a gush of blood proved instantly fatal to the patient. Now, I think it extremely probable, or rather almost certain, that if a cyst so intimately connected with the carotid artery had been converted into a suppurating sinus, hemorrhage no less profuse than uncontrollable would have been the consequence. If, again, the disease had been left to pursue its course, there can be little doubt that the swelling must, before long, have seriously interfered not only with the circulation of the head, but also with deglutition and respiration—and that its spontaneous conversion into a sinus would have been attended with no less risk of hemorrhage than if this change had resulted from surgical interference. These considerations, of course, afford no excuse or apology for the mistake that was committed; but, as already remarked, tend to lessen the painful feelings excited by its consequences.—*Monthly Journal.*

A new and certain method of curing False Joints, or Pseudo-Arthrosis. By Professor Dieffenbach.—The most simple method of treating false joints, is by rubbing the ends of the bones strongly together. This deserves the first trial, but is chiefly successful in children and recent cases. The additional use of irritation or blisters to the skin is productive of no benefit. The use of setons drawn through the false joint has been much recommended; it is apt, however, to produce violent inflammation and extensive suppuration, and in the most favorable cases seen by our author, it only strengthened the intervening ligamentous substance, producing in no instance a true firm callus—the improvement always proving temporary. Resection of the ends of the bones has also been performed in various ways by different surgeons. In three cases so treated by our author, the deformity was only rendered worse, and the extremity became more and more like a flail. Many other remedies have been used, as cauterization of the ends of the bones, etc., several of these being more dangerous than their predecessors, and none more certain of cure.

Instructed by the experimental researches of Flourens, Duhamel, Troja, etc., that if a bone be bored through transversely, and a wooden pin introduced, or if this be forced longitudinally into the medullary canal, the bone inflames, swells up, and becomes covered with a copious effusion of new bone, our author was led to apply this practically in the case of pseudoarthrosis. He first, however, attempted to gain his end by the simpler method of merely boring through the bone without the introduction of pins. This was successful in the first case.

A healthy girl of nine years old, with a false joint in the right leg, accompanied by considerable contraction of the flex. policis long., tibialis posticus, and tendo-Achilles, so that the limb was at the broken part bent at an acute angle; these contractions were first removed by subcutaneous incision, and a few weeks later, the ends of the bone perforated eight times by a small borer. The limb was at the end of three months perfectly firm.

In the second case, that of a girl aged twelve, with a false joint, likewise of the leg, a similar method was pursued, but at the end of six months no callus was produced, and although the limb was at first tolerably firm, it speedily became again bent. The author consequently resolved to repeat the operation, adding the introduction of wooden pins, as the mere boring had not proved sufficiently irritating. He had first, however, an opportunity of employing this method in two other cases, and from its safety, efficacy, and the ease with which it is performed, he is induced to recommend it to the profession.

In performing this operation, the limb must be strongly extended, to bring the ends of the bones in apposition, and there they must be retained. When the false joint is of long standing, and the parts in a manner fixed in a distorted position, a previous treatment is necessary to bring them straight. All rigid and contracted tendons and ligaments must be cut through subcutaneously, and the ends of the bones brought correctly in apposition by careful extension and bandaging. The limb being fixed, and the skin and soft parts made tense at that point where the bones lie nearest the surface, a long narrow, but broad-pointed knife, is then passed down to the bones, about half an inch from the broken ends. Through the opening thus made, a gimlet of the thickness of a quill is passed down, and the bone carefully and slowly perforated, occasionally withdrawing the instrument lest the bone should be split, which is apt to be the case when the perforation is made so near the end of the bone; yet the irritation would not prove sufficient if placed at a greater distance. Two ivory pins, slightly thinner than the gimlet, are then to be well oiled and forced through the bone till their ends can be distinctly felt on pressing the opposite side. They should be of such a length that an inch should project above the soft parts. These are to be protected by a handful of charpie, and a bandage and splint then applied to retain the limb in position. One hole should be bored and the pin introduced before the other is commenced.

In pseudo-arthrosis of the patella, the gimlet should be only half the thickness above mentioned, the holes ought not to be bored quite through the bone, and the pins must be drawn together by a twisted suture. After the operation, the limb swells and inflames; the bandage should then be removed, and suppuration induced by poultices. About the fifth or sixth day the bones and periosteum begin to swell, and may be felt through the soft parts as round ball-like tumors. Should the violent obtuse pain of inflamed bone occur, the pins must be removed for a few days, the poultices assiduously applied, and then the pins again introduced; it is seldom necessary to retain them longer than fourteen days, but this period may be extended if the bones show little reaction, and if their swelling be but trifling.

So long as the suppuration continues, the pus must be allowed free vent; when this, however, is lessened, the bandage may be allowed to remain for a few days, and the cure finally completed by the application of a light splint and bandage. During the whole time, the proper position of the limb must be carefully preserved.—*Casper's Wochenschrift.*

Fistula in Ano.—DR. VAN CAMP has communicated to the Society of Medicine of Anvers a method of curing fistula in ano without operation, by means of injections of iodine. A workman, aged twenty-four, had had an enormous abscess at the anus, which became fistulous, its inner opening being very high up in the gut. Wishing to avoid operating in the case, a solution of nitrate of silver was tried as an injection, but it failed to do any service, and then recourse was had to an injection of equal parts of tincture of iodine and water, which was thrown into the fistulous cavity twice a day for five days. The first injections were attended with severe pain, and when the inflammation produced by it was considered sufficient, the proceedings were suspended for three days; they were then renewed, as a little fœcal matter was discharged from the wound, but the cavity had diminished to an inch in height, and by the sixteenth day the cure was complete.—*Jour. de Méd.*

Lithotomy and Lithotrity.—(Abstract of the proceedings of the Académie de Medicine, Paris.)—The discussion of the comparative merits of lithotomy and lithotrity still continues to occupy attention. The long reply of M. Civiale, to the objections of Velpeau, Roux, etc., comprehends three distinct parts. In the first he endeavors to answer Velpeau, Blandin, and Malgaigne; in the second and third parts he treats of two very important questions,—those of the *explorations* and the *relapses.* The influence of the explorations of the bladder upon the economy are said by M. Civiale to be exaggerated, and that they are not worse when made with lithotrity instruments than with the ordinary sound. He denies that the preliminary examination renders the operation of lithotomy, if eventually necessary, at all more dangerous. Of twenty-eight of his patients operated upon under these circumstances, nineteen were cured and nine died; while of seventy-three cases operated upon in the hospitals under other circumstances, twenty-five died. M. Civiale also stated that, in the cases of Souberbielle, of eleven operated upon after the passage of lithotrity instruments, ten were cured.

Respecting the relapses, he endeavors to prove that the reproduction of stone is more frequent after lithotomy than after lithotrity. To show this, he states that eighty-eight cases of lithotomy exhibited nine relapses, while out of 244 cases of lithotrity fourteen only recurred. He explains the fact by supposing that lithotomists pay less attention to the state of the bladder subsequent to the operation, than those do who perform lithotrity; and that as the secondary stones are generally phosphatic, their formation may be determined by the inflammation of the bladder, etc., thus neglected.

M. Civiale was replied to more particularly by MM. Blandin and Velpeau, both of whom insisted upon the danger which frequently follows the explorations of lithotrity, more especially when, as was often the case, lithotomy was eventually resorted to.

M. Roux, who took part in the debate, was somewhat discursive in his remarks, alluding to the comparative merits of the perineal and the oblique section, the frequency and causes of stone among the children of the poor, etc. He stated it as his conviction, that in children lithotomy should be the rule and lithotrity the exception. In a subsequent part of his discourse, he exhibited the results of his stone operations in private practice. Of these, 54 in number, 6 were in children under ten years, in whom all were successful; 48 were in subjects above that age,—37 cures, 11 deaths. It follows, therefore, that the total mortality was 11 in 54, or 1 in 5. The contra-indications to lithotrity, in his opinion, may be thus laid down:—1. In children under ten without exception. 2. When the stone exceeds a certain volume. 3. When there are several large stones. 4. When the stone is very hard. 5. When there is great irritability of the bladder.

The opinions of M. Roux were in the next place strongly opposed by M. Segalas, who maintained that children, so far from being bad subjects for lithotrity, were in reality the best; he denied also that hardness of the stone was a forcible objection to the operation.

Dr. Guerineau read a case of aneurism of the palmar arch, cured by electro-puncture.

M. Christophe introduced a new stethoscopic sign intermediate between bronchophony and ægophony, to which he gave the name *ægony*. The sound is said to be a short tremulous tone, elicited by the voice, and is considered to be indicative of effusion.—*Provincial Med. and Sur. Jour.*

New mode of restoring the Lips.—(Abstract of the proceedings of the Academie des Sciences, Paris.)—M. Sedillot, of Strasbourg, introduced a new method of *cheiloplasty*, which he had devised to remedy the deformity caused by extensive cancerous ulceration. The object of his operation was chiefly to supply the defect with integument, which from the freedom of its circulation should not be inclined to sphacelate. This he accomplished by dissecting a square portion from each cheek, and uniting them in the centre. The result was very satisfactory.—*Ib.*

New method of reducing Hernia of the Iris.—This consists simply in cauterizing a spot, at a distance from the hernia, with nitrate of silver; it is based on the following data:—1. Hernia of the iris through the cornea does not become disorganized for some days. 2. The protruded iris, irritated by the contact of the tears or the air, or by the friction of the superior eyelid, or even of the edges of the ulcerated cornea in which it is imprisoned, has a tendency to swell, and the irritation and swelling prevent mortification and *arrest cicatrization.* The progressive engagements of the iris is proved by observation; if a recent hernia be touched with an irritating body, it instantly acquires three times its original size; and if we watch the progress of cicatrization in the ulcer of the cornea, the hernia being unreduced, the pupil is found to diminish by degrees, and even to disappear. 3. Adhesions are established between the iris and the cornea before the iris is disorganized; for a few days these are very weak, and may be destroyed at once *by augmenting the vascular action of the parts which furnish them*, or by a new inflammation developing itself in another part of the eye. 4. The materials of adhesion are in the first instance furnished by the cornea; the cornea is in a morbid state at the point at which the healthy iris protrudes. 5. These materials are derived from the divided vessels of the ulcer, the origin or base of these vessels being at the circumference of the cornea. 6. By irritating the part in which the base of these vessels ramify, the secretion at the edges of the ulceration is augmented; in this way a fluid secretion may be induced around the hernia, which will destroy the imperfect adhesions, and give freedom to the iris in the ulcer, which latter is augmented in size by the secretion. 7. By putting the iris under the influence of belladonna before producing such an irritation mechanically, we obtain a power, placed behind the cornea, acting from before in a direction backwards, and capable of reducing the hernia.

After this beautiful chain of pathological reasoning, Desmarres states:—A portion of the iris having projected through an ulcer of the cornea, and instillations of belladonna having been used for some days without any beneficial result, it may be inferred that the pupil has been rendered as large as possible by this agent, the operator proceeds thus:

The upper eyelid being held by an assistant, and the lower eyelid depressed with the index-finger of the left hand, he applies with the right hand the point of a pencil of nitrate of silver to the conjunctiva of the bulb, close to the cornea, and cauterizes it in three or four points as energetically as possible, without penetrating the mucous membrane too deeply. A very active irritation of the vessels which feed the ulceration of the cornea is thus provoked, and the secretion necessary to set the iris free is the result. Sometimes, instead of points, a line of cauterization is made in the neighborhood of the hernia, and in some instances, where the first cauterization has failed, after an interval of two or three days, a second, third, or fourth even, on the cornea, but taking the greatest care that the caustic does not extend to the iris, otherwise the hernia would at once be increased. In a rare instance success was not obtained until after the eighth application; but the reduction is generally effected after the first, second, or third. Desmarres has succeeded in so many instances by this method, that he has ceased to count the operations.—*Mr. Ancell's Report on Ophthalmic Surgery.*

PRACTICAL MEDICINE.

Typhus Fever.—Now, what, asks Dr. Kennedy, is the cause of the greater mortality from fever, amongst the wealthier classes? It is that the treatment usually adopted is too much on the expectant plan. By this means the disease progresses till the symptoms bid defiance to treatment.

"Fever," continues Dr. K., "as it appears amongst the middle classes, (and I am only now speaking of it,) in general becomes serious by the brain getting engaged. That is, the majority of cases present brain symptoms, and are serious or fatal as the case may happen to be. This I take to be an important distinction between fever amongst the poorer and wealthier classes. Not that the former do not present us with similar forms of the disease, but only that the latter present it much more frequently. When the disease is once fully formed, it usually takes one of two courses. The patient early exhibits signs of stupor, which gradually passes into insensibility, coma, and death. Or else delirium shows itself early; this increases gradually, till the patient becomes raving mad, as the expression is; he never sleeps, and he dies after some days, to all appearance exhausted by the continued violence of the symptoms; though even here coma is very apt to terminate the scene. It is not necessary for my present purpose to advert to the other symptoms attendant on this form of fever. But let the case be traced further. What does post-mortem examination disclose? Do we find nothing in the brain sufficient to account for the symptoms before death? We do; and I believe the appearances are constant, provided the patient dies in either of the ways alluded to. What, then, is the morbid anatomy (not the pathology) of such cases? Venous and frequently arterial congestion; injection of the brain's substance; a considerable amount of subarachnoid effusion, often of a gelatinous consistence; patches of opacity in this membrane itself; and also the appearances as if the blood had exuded from the vessels; or as if the latter had actually ruptured. Such are the morbid appearances which have come under my notice in these cases; and I have had ample opportunities of confirming them. I have examined the brain of an individual who died of the very worst form of fever on the seventh day, reckoning from the rigor; and I have examined them at all subsequent periods; and still the appearances were very much the same. It is quite true that differences in degree existed; such, for instance, as there being more effusion in one case than another. But is this not to be expected? On the contrary, is it not what we should naturally look for? If we take any other disease that is often fatal, do we find the amount of morbid lesion a constant quantity? Is it so in pneumonia, in pericarditis, in peritonitis? Is it not well known to be constantly varying? And why, then, should we not find the same to obtain in the brain? The lesions described as occurring in this organ, will, I should suppose, be allowed to be sufficient to account for the symptoms present before death.

In making these remarks, I would not have it supposed that I am an advocate for the theory of fever advanced by Clutterbuck; for I believe that the state of brain described is secondary to the cause of the fever itself, whatever it may be. It is in point of fact a complication of the disease; but certainly a very important one.

If, then, it be granted that fever, as it occurs amongst the higher classes and in the majority of cases, usually is serious by the brain becoming affected; if this occur at a particular period of the disease; if experience, above everything else, tells us that when the head affection has set in, our best efforts are but too frequently baffled; and if anatomy shows us a considerable amount of morbid lesion in the organ, what course, I would ask, ought we to pursue? Is it to wait till these fatal symptoms have declared themselves? I would say not. On the contrary, let our treatment anticipate them. Dr. Graves, who has given a large attention to the subject, and written most ably on fever, has long since recommended treatment with the same object in view; that is, to anticipate the head symptoms. For this purpose he advises free leeching, followed by powerful blistering. I would go a step farther, and would not hesitate—wherever the state of the patient allowed of it—to take blood from the arm. Recollecting, however, that the disease has always a certain duration, it will be more prudent to take but a small quantity at one time; and, if necessary, this can be repeated. The quantity may vary from eight to twelve ounces. I am well aware of the arguments which have been, and still are urged by many against this line of practice. It is said that it is one that may jeopardize life. But is there any force in such an argument? Does it not equally apply to the use of purgatives? of antimonials? of opium? of wine? But it will be said that bleeding, being more powerful than any of these, may produce effects which it is not possible to combat. Not so, it may be replied, if only common discretion be used. It is granted that bleeding will lower the patient. Strange it would be if it did not. Is not this the very reason for which it is employed? Is it not our object in every severe case of fever, to lessen the symptoms, so as to make them compatible with the existence of life? Have not leeches, blisters, purgatives, and antimonials, all the same tendency? Yet we hesitate not in using them. The weakness, too, that is induced, is it so very formidable a symptom? Will any one compare it for a moment with the risk which attends on delirium, or still more on coma? On the contrary, I feel confident that every one who has had to treat fever, will agree with me in saying, that no cases of this disease go on more smoothly than those which require to be fed, as it were, all through. That is, those in which weakness has been, from first to last, the most prominent symptom. As to the argument sometimes advanced against the use of bleeding—namely, that it causes a very tedious convalescence, it ought not to sway our judgment for a moment; inasmuch as we have been considering a class of cases—and those only—in which life is brought into the greatest danger from head symptoms by the tenth day."

[Dr. Kennedy states that he is fully borne out in his views by the late Dr. John Crampton, of Dublin, who often bled his patients on the fifth, sixth, and seventh days of the disease, and even when petechiæ existed. After relating some of the effects of blood-letting, Dr. Kennedy says,]

Such were the more immediate effects of general bleeding, as it came under my notice; and they were wonderfully uniform; fully as much so as any other point in the practice of medicine. But they were not the only results; for when the time arrived for the use of stimulants, these were borne well, and very rarely did it happen that wine had to be countermanded—a fact of considerable importance; as every one must be aware what difficulty, almost uncertainty, attends the administration of this valuable agent amongst the wealthier classes. My conviction is, that if treatment were adopted in the earlier stages of fever—what might be called preparatory treatment—that then wine could be ordered at the proper stage with much greater certainty, and far better results. Other diseases, too, would bear out this remark. If we suppose a case of acute bronchitis or pneumonia, in which the stage that bleeding ought to have been used has been allowed to pass by, we then become aware how much more difficult the treatment of such a case becomes; and how frequently all our usual remedies are proved to be useless. So, as it appears to me, is the case in fever, when not met, as it ought to be, in the early stage.

The last result of bleeding in fever, is, I believe, the tendency it has to prevent some one or other of those secondary congestions, or inflammations, which are so very apt to make their appearance, and render the disease still more serious than it was at first.

What, then, is the substance of the remarks now made? Bearing in mind the class of cases to which they more particularly apply—that is, fever, as it is usually met with amongst the better classes, where head symptoms so commonly supervene about the eighth day: I would say, that the early treatment may be of a more active kind than that usually adopted. That it may, nay, ought, to be of such a kind, as to interfere directly with the disease; that is, by moderating the symptoms. That for this purpose, and with ordinary prudence, general bleeding may be used with perfect safety. That such lessens the intensity of the various symptoms—prepares the patient for the administration of wine, and tends to prevent the accession of those secondary congestions or inflammations, owing to which life is so frequently lost. That in point of fact the treatment should anticipate the coming on of head symptoms, as Graves has long since advised; and that it should partake of the active, often of the antiphlogistic plan, as distinguished from the expectant, with which latter it is possible too many rest content at the present day.—*Dub. Med. Press, Oct.* 20, 1847, p. 241.

On Cod Liver Oil in Struma, by Dr. Graves.—Dr. G. corroborates the testimony of those (and, amongst the rest, of Dr. Bennett,) who have extolled the use of this medicine in strumous diseases in general. He has seen it do what he never saw any other remedy effect, i. e., reduce to the natural size amygdalæ that were enlarged from the period of extreme youth. A most remarkable instance was that of a young lady, aged about nineteen, whose amygdalæ were as large as small walnuts, and which were treated without effect for two years, both by iodine internally, and nitrate of silver locally. A three months' course of cod liver-oil left no trace of the disease behind. Under the influence of this oil, the enlargement of the cervical glands in young persons of a scrofulous habit frequently disappears, and the tendency to the formation of phthisis, and the recurrence of strumous hæmoptysis, is occasionally overcome. In persons of a consumptive tendency, he considers this a valuable addition to our remedies.—*Monthly Journal, June*, 1847, p. 925.

Influence of Atmospheric Electricity on the System.—By M. Pallas.—M. Pallas, chief physician of the army in Africa, asserts that the greater number of diseases, particularly "neuroses," are due to the influence of diffused electricity, the principal sources of which are thunder-clouds and marshy soils. By their geographical constitution, and their effects upon the human organism, marshes (says M. Pallas) present the closest analogy with the galvanic battery. Their deleterious effects are formidable in exact proportion with the quantity of saline or organic matter contained in the waters; and observation proves that diseases developed by the influence of marshy emanations are at first of a nervous nature; hence one of the methods which will be most efficient in preventing intermittent fever and neuroses, must be electrical isolation of chairs, beds, and tables, from the soil, by glass supporters.—*Med. Times.*

Treatment of Scabies by Olive Oil.—M. Griffi, of Sardinia, has treated scabies with great success by the simple application of olive and other fixed oils. The method consists in covering the affected parts with the oil, slightly heated to favor its absorption, three times a day. The itching completely subsides in three days, the eruption dries up and desquamates, the redness and swelling disappear, and the patient is generally cured in twelve days. The application should be continued a few days to ensure success. The almond, linseed, nut, and other oils, and even simple lard, will produce the same effect.—*Annales de Thérapeutique, and Monthly Jour. of Med. Sci.*

On the Morbid Anatomy and Pathology of the Typhus Fever which has been prevalent in Edinburgh during the Session 1846—7. By Dr. Hughes Bennett.—Until the commencement of the present session, cases of intestinal lesion in typhus fever have been exceedingly rare. During the three years the author acted as pathologist to the Royal Infirmary previous to the present session, and during which he had examined upwards of 500 individuals who had died of the disease, he had only met with it three times. Since November, however, they had become more frequent, and the author had studied the morbid anatomy of typhus in reference to the opinions put forth by Rokitanski, Engel, Hammernick, Gunsburgh, and other pathologists of the Vienna and Prague schools of medicine. According to these observers, typhus fever is accompanied by a dyscrasia of the blood, and the intestinal and other lesions produced contain a peculiar deposit called typhous deposit, which bears the same relation to the constitution of the blood as tubercle and cancer do to the tubercular and cancerous cachexiæ. The cases of fever admitted into the Royal Infirmary from the 1st of November, 1846, to the 30th of June, 1847, amounted to 2071. Of these 278 died; owing to the imperfect arrangements which exist in the Royal Infirmary, however, regarding post-mortem examinations, only 63 of these cases had been inspected after death. It was upon these data that the following statements were founded:—

The organ most frequently affected was the spleen. In the majority of cases it was more or less enlarged and softened, presenting a mahogany brown color, and creamy consistence; so that, when pressed, nearly the whole of its parenchyma could be squeezed out of its capsule. In ten cases the spleen contained one or more infiltrated masses of typhous deposit of a yellowish or brownish-yellow color. In two cases the deposit softened and burst into the peritoneum, causing fatal peritonitis. The organs most frequently affected after the spleen were the lungs. The most common lesion was bronchitis, the bronchial lining membrane being of a deep mahogany or purple color, more or less infiltrated with serum or exudation. The fine bronchial tubes were frequently filled with a muco-purulent matter more or less fluid; and, in a few cases, choked up with a reddish-brown creamy substance, probably a modified form of the exudation (typhous deposit) of Ramak. The apices of the lungs were very commonly œdematous, yielding on section a copious, greyish, frothy fluid. In fifteen cases the lungs were more or less consolidated by exudation, which seldom presented the characters of normal hepatization. It was sometimes of a dirty-yellow tint, at others of a brownish chocolate color, existing in masses of irregular outline, and of variable size, resembling the typhous deposit previously spoken of, occasionally found in the spleen. In three cases there was pulmonary apoplexy. The intestines presented the lesion so well described by Bretonneau, Louis, Cruveilhier, and others, (dothinenteritis, typhoid, ulcer, &c. &c.), in nineteen cases. The peculiar elevation, sloughing, and ulceration of the round and oval patches, had been carefully observed, and the anatomical description given by Mr. Goodsir, (Monthly Journal, p. 353, 1842), for the most part confirmed. The elevated patches had been observed occasionally to extend as high as the duodenum, and as low as the rectum. In one case, numerous dothinenteric elevations, about the size and shape of a split pea, extended all over the ascending and transverse colon. In a few cases the isolated follicles in the large intestines were observed swollen and empty, presenting in their centre a dark blue or black spot. In others, the round and oval patches of the small intestine were hypertrophied, elevated above the mucous membrane, and of a greyish or slate color. Perforation of the intestines, causing fatal peritonitis, had occurred in three cases. Dysentery, with flakes of lymph attached to the mucous membrane, over the ascending and transverse colon, was associated with intense dothinenteritis in one case. Oval and round cicatrices, exhibiting different stages of the healing process of the intestinal typhous ulcer, were observed in two cases. In all cases where the intestinal ulcerations were recent, the mesenteric glands were enlarged, soft, and friable, and of a greyish or reddish-purple color. Some of these glands reached the size of a hen's egg. On section, they presented a finely granular surface of a dirty yellow-greyish or dark fawn color, produced by infiltration of the typhous deposit, which was generally soft and friable, but sometimes in one or more parts of the swollen gland broken down with a fluid of creamy consistence. In two cases there were glossitis and laryngitis, with tonsillitis; in one case abscess in the kidney, and in one an abscess in the posterior mediastinum.

The brain did not appear to participate much in the disease. It presented only occasional congestion, with slight effusion into the sub-arachnoid cavity, or into the lateral ventricles.

The blood in the great majority of cases was fluid, and of a dirty brownish color. In those instances, however, where the disease had been protracted, and especially in such as presented well-marked typhous deposit, firm coagula were found in the heart and large vessels.

In seven cases no lesion whatever could be discovered.

The typhous deposit consists of a yellowish or flesh-colored exudation, sometimes passing into a brownish color from the admixture of more or less blood. When first formed it is of a tolerably firm consistence, as in the spleen and glands of the mesentery and intestines, but rapidly undergoes the process of softening. In parenchymatous organs it may be slowly absorbed or resolved, as in the lungs, spleen, and mesenteric glands, or it may produce ulceration or gangrene. In either case, should the individual recover, cicatrices with puckerings in the tissue are produced, the parenchyma around the deposit having contracted and become indurated. On mucous membranes the deposit is thrown off in the form of slough, and discharged by the excretory passages, leaving a characteristic round or oval-shaped ulcer. This process may be followed by cicatrization or perforation of the gut by ulceration. In the former case it leaves a round or oval-shaped depression in the mucous membrane, often of a blue color, which subsequently becomes covered with epithelium: in the latter case it produces death by peritonitis.

The minute structure of the typhous deposit varies in different situations. In the lungs, spleen, and intestinal canal, it contains at an early stage a number of irregularly-shaped corpuscles. They are about the 1-100th of a millimetre in diameter, contain several granules, with a nucleus about the 1-500th of a millimetre in diameter. Acetic acid renders them more transparent. They are conjoined with numerous granules and molecules, which become more abundant as the process of softening advances. In the mesenteric glands a higher degree of cell formation takes place. Cells are formed about 1-50th of a millimetre in diameter, containing from two to six, and even sometimes more nuclei, which become very distinct with thick edges on the addition of acetic acid, whilst the cell wall is partially dissolved. The same cells may occasionally be seen in the elevated typhous deposits of the intestinal glands. Sometimes the only appearance observable in the deposit is that of numerous molecules and granules mixed with blood corpuscles. Dr. Bennett considered that the pathology of this affection consisted in a primary alteration of the blood, caused by the peculiar miasm or poison causing typhus fever; that, under such circumstances, local inflammations were set up in particular organs, and that the exudation attending it, instead of presenting the usual appearances, and undergoing the usual transformations, became modified so as to constitute the typhous deposits.

Dr. Christian noticed some time ago, (Art. Fever, Lib. of Medicine), that the Edinburgh fever was especially characterized by pulmonary complication. We know that in France and Germany intestinal lesions are most common. During the present session, however, the latter had also become frequent in Edinburgh, and it was a fact worthy of observation, that this change occurred at a time when scurvy and bad diet prevailed, circumstances often known to be associated with this form of fever in France and Germany.—*Report of the Edinburgh Med. Chirurg. Society: Monthly Journal of Med. Sciences, October,* 1847.

On the Detection of Biliphæin in Albuminous Fluids. By Dr. Heller.—It has long been known that the presence of the coloring principle of bile in any animal fluid may be ascertained by the addition of nitric acid, which induces a rapid succession of changes in the color of the fluid, producing first a green tint, then blue or violet, then red, and lastly yellow. But in order that this play of colors may take place, it is necessary either that the biliphæin should exist in a large quantity, or that, if in small quantity, a particular method should be pursued in applying the test. This method consists, according to Heller, in adding the acid very gradually, and stirring the mixture until the green color appears; then in adding a few drops more of the acid, and stirring again, upon which the blue or violet tint is produced; and by a similar cautious addition of the acid, the other characteristic colors may also be manifested.

In a former essay* Dr. Heller pointed out an easy method of detecting the coloring matter of bile in an albuminous fluid, and showed the advantage afforded by the presence of the albumen in allowing the existence of even the smallest quantity of bile to be ascertained. Since then, however, he has found another method, by which he says the same information may be obtained with greater certainty, and less liability to error. This consists in dropping into a test-tube containing concentrated hydro-chloric acid portions of the albuminous fluid supposed to contain biliphæin, until the albumen appears as if about to coagulate. Nitric acid is then to be gradually added, and on stirring the mixture a distinct green color speedily appears if biliphæin be present; and if this substance exist in tolerable quantity, the green color is shortly succeeded by the other characteristic tints.—*Heller's Archiv,* 1847, Heft. iv.

Obstruction of Pulmonary Artery from Renal Disease.—Dr. Bright has furnished us with a very marked example of renal disease determining the occurrence of fatal obstruction in the pulmonary artery.

M. R., a middle-aged woman, was admitted to Guy's Hospital, Nov. 8th, 1826, with anasarca. She had been two or three times in the hospital, during the last two years, with renewed attacks of the same disease, and had gone out relieved. She was now in the most hopeless and advanced state of disease. The effusion somewhat diminished under treatment; but, on the evening of the 21st, she became rather suddenly worse, complaining of great difficulty in drawing her breath; and, although assistance was immediately obtained, she died in a few minutes.

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* Vide Medical Gazette, 1845, vol. 1, page 1089.

Sectio cadaveris.—Lungs tolerably healthy in structure; but it was found that the *pulmonary artery* was completely blocked up by a coagulum of fibrin of firm texture. The hand was not particularly large. The vena portæ, and its large branches going into the liver, were likewise obstructed with coagulum, nearly separated from the red particles, and the saphena vein was in the same condition. The liver was tolerably free from morbid change. The kidneys afforded very fine specimens of the confirmed granulated change. The spleen was healthy.

On a remarkable case of Protracted Hæmoptysis, symptomatic of Primary Disease in the Stomach, succeeded by violent Epilepsy, and the recovery of health. By HENRY BURTON, M. D., Physician of St. Thomas's Hospital.—The history of the case offers a good example of the co-existence of severe gastric derangement, with constant headache, copious hæmoptysis, occurring at irregular intervals during four years and three-quarters, with rigid spasm of the lower extremities, followed by the restoration of good health, after the supervention of a series of violent epileptic fits, which quickly succeeded the disappearance of the pulmonary hæmorrhage.

The author, after citing the opinion of M. Andral, relating the influence exerted by different organs on the production of congestion in the brain, and also the opinion of Dr. Copland upon the importance of tracing "the origins and relations of sympathetic and symptomatic phenomena, with reference, not merely to diagnosis, but also to prognosis and treatment," proceeds to describe the case of an intelligent female, aged 18 years, of a spare habit, and rather under the usual height, who was admitted into St. Thomas's Hospital on the 5th of September, 1843.

She had then been ill with symptoms referrible to the chest and abdomen for two years and a quarter, and for two years the abdominal symptoms had been complicated with copious hæmoptysis, partial loss of voice, and an almost total want of power over the lower extremities. She had been confined to her bed during the greater part of her illness, and the abdominal pain had never entirely ceased; the hæmoptysis had recurred very frequently; the uterine functions had been always regularly performed; and, with the exception of the pulmonary hæmorrhage, the patient had never experienced any habitual loss of blood. Copious hæmoptysis recurred seven times after admission in forty-one weeks. The patient returned home in June, 1844, in a much better state of health than she had experienced during the three years preceding, although not entirely cured, and was re-admitted a second time in December, 1845, after an interval of a year and a half, with analogous symptoms of gastritis, co-existing with copious hæmoptysis.

After the second admission, copious hæmoptysis recurred three times in thirteen weeks, and slight hæmoptysis daily, until epilepsy supervened, when it ceased entirely.

The author reviews the circumstances which biassed his judgment in the early, as well as final, treatment of the case, and endeavors to show that the hæmoptysis was dependent on a primary disease of the stomach, and not of the lungs; he notices the inefficacy of the ordinary remedies prescribed upon the supposition of the pulmonary origin of the hæmoptysis, and states it recurred until the irritability of the stomach, indicated by pain and frequent vomiting, was obviated by the use of mercurials; the urgency of the gastric symptoms then began to abate immediately, and the hæmoptysis ceased in twenty days after they were first prescribed.

He quotes the authority of Hoffman and Mr. Rumsey in support of the opinion that gastric irritation may excite, through sympathy, copious hæmoptysis, independent of any other signs of phthisis, and that it does invariably lead to a deposition of pulmonary tubercles. He disapproves of the use of the acetate of lead in the treatment of symptomatic and copious hæmoptysis, and, in conclusion, expresses his opinion, that whenever the stomach is the seat of inflammatory action, associated with copious hæmoptysis, independent of other disease referrible to the thoracic viscera, the safest plan, in reference to the treatment, is to consider the hæmorrhage as a salutary act, by which the relative plethora in the lungs is relieved, and the first indication of cure to be the removal of the gastric disease.

Dr. Nevins on the beneficial effects of Cold Water in Fever.—At a recent meeting of the Liverpool Medical Society, Dr. Nevins read a paper on the beneficial effects of the use of cold water in fever. He applied it by means of a sheet dipped in cold water, and folded once round the body, and immediately enveloped the patient in four or five blankets, so as carefully to exclude the external air. Profuse perspiration was soon induced, which was allowed to continue for one or two hours, and was then checked by folding the patient for a moment in another cold wet sheet, after which he was rubbed dry and placed in bed. Whilst in the blankets, cold water was allowed to the patient, as a drink, if desired.

The patients operated upon were from 10 to 35 years of age, and were generally within the first three or four days after the accession of the fever, whilst the skin was hot, and the pulse frequent, with some power. In these cases the skin became soft and moist, the heat abated, and the pulse was reduced in frequency, and Dr. Nevins had not observed that any injurious depression resulted from the perspiration, whilst the severe headache frequently present was essentially relieved. Even when there was slight bronchial affection he had used this plan without its being increased, and, on the contrary, it appeared to be mitigated, if previously slight. If severe, he never applied the cold sheet.

He read a letter from Mr. H. S. Taylor, giving the result of this plan of treatment in thirty-five cases of fever, treated in the West Derby Fever Hospital, which corresponded with his own experience, except that the relief obtained when headache had been previously very severe was generally more decided than in the cases related by himself. Mr. Taylor had applied the wet sheet two or three times in succession in some of the cases, when the febrile symptoms returned, and always with the same benefit. In two or three instances the patients had not recovered, but the fatal result was in no way connected with the treatment, having taken place at an interval of some weeks after the application.

Dr. Nevins further adverted to the results of this plan of treatment in some cases of constitutional headache and habitual constipation, which had been satisfactory; and in cases of general anasarca in which he had not observed any benefit derived from it.

Mr. Higginson corroborated Dr. Nevin's statement as to the safety of the treatment, when some degree of bronchial affection was present, provided there was plenty of vigor in the patient. In a young child with a slight febrile attack, and a good deal of bronchial derangement, the chest was relieved, and the febrile state removed.

Sir Arnold Knight feared that, unless caution were exercised, an injurious amount of depression would result from the continuance of the perspiration after the patient was removed from the sheet, and placed in bed; and mentioned a case in support of his opinion. He had learnt from some professional friend, who had likewise tried this plan, that the patients required an earlier administration of food and stimulants than in ordinary cases. In one very severe case of violent delirium during fever, in a young man, the application of the wet sheet had been followed by the most satisfactory results; and, though the patient ultimately died, he was satisfied that life had been prolonged, and the severe symptoms mitigated by the treatment.

Dr. Nevins considered that the application of the second wet sheet, after the perspiration had been allowed to continue sufficiently long, was an important part of the treatment, as it prevented subsequent profuse or depressing sweating, and, being followed by a healthy glow, obviated the objection suggested by Sir Arnold Knight: and in the cases observed by Mr. Taylor and himself there had not been any injurious depression.

MIDWIFERY.

Placenta Prævia.—Mr. Edward Ray read some cases, with observations, of Placenta Prævia.—Feeling that in difficult parturition, no class of cases are attended with greater danger to the life of the mother and the child, and that none perhaps are more awful, or occasion more anxiety even to the practitioner, than those of placenta prævia, I am induced to bring before the notice of this society, the following cases, in which the placenta was either expelled or removed from the uterus, when the patients were exhausted by the loss of blood, and were still bleeding, with the effect of causing the immediate cessation of the hemorrhage; and that after an interval, which allowed of the free use of restoratives, the patients, without any further loss of blood, were delivered of their children by uterine action.

Case I.—Mrs. Duffield, (residing in a lone cottage in the midst of some fields,) aged 27, the mother of one child, and seven months advanced in pregnancy, was, on the 8th of April, 1847, attacked suddenly, and for the first time, with hemorrhage from the uterus, without pain, about 4 P. M. The hemorrhage increasing, and being alone, she determined to go to a man working at some distance, (about 300 yards,) and send him for assistance. On walking, the hemorrhage increased, and with it her alarm; she, however, effected her object, and has since described "the blood as if pouring from her" on her way back. Before regaining her cottage, she stated that she could not see, and with difficulty succeeded in groping her way by palings, &c., to the cottage door, and from thence to the bed, on which she fell. I arrived about 5 o'clock, and found her lying partly on the bed, and her clothes dyed in blood: she was blanched, cold, almost pulseless, unconscious, and blood continued to drain from her; brandy was freely given, and after examination one drachm of powdered ergot in form of infusion. On examination, the os uteri was found dilated, and the placenta bulging through it: anteriorly the distended membranes could be reached, and a foot detected; the membranes were then ruptured, and the foot brought down; hemorrhage continued; slight uterine pains occurred; pressure was applied over the uterus, which was firm, and the child, a female, delivered, still born. On examination, another fœtus was detected: the hemorrhage continued, and placenta occupied the same position: with some difficulty I reached and ruptured the second bag of membranes: the fœtal head descended, and with the gush of liq. amnii the placental mass was expelled, which proved to be a double one, and remaining connected by one cord to the child unborn; the hemorrhage now (half past 5) ceased, and although uterine pains did not recur for two hours at least, and the delivery of the second (a still-born female) was not completed until after half past 8, *there was no return of it.* After the expulsion of the child, the uterus did not contract firmly for some time, but I could detect an unusual hemorrhagic discharge; steady pressure was at first kept upon the uterus with the hand, and afterwards by means of a pad and bandage firmly applied. Her temperature improved with her pulse, after the free administration of brandy in gruel, and she was partially conscious during delivery. After delivery she suffered from hydrosis, and this was followed by general anasarca, accompanied throughout by defect of vision, from which she has eventually recovered, and has since given birth to another child. It is impossible to form any idea of the quantity of blood lost in this case; her gory track was more than readily to be traced, and the cottage floor was covered with blood.

Case II.—Mrs. Duke, aged 28, 4 feet 10 in. in height, and possessing a small rounded pelvis, had given birth to two small living female children at the full period, after long and severe labors. Had aborted once at the third month; and had expelled an unimpregnated ovum, after having obscure symptoms of pregnancy for five months. She was in the last month of utero-gestation when I was summoned to her, at half past 4, P. M., of October 14th, 1847. I found her upon the bed, lying quietly upon the left side, and the abdomen; unconscious; ghastly pale; cold; pulse scarcely perceptible; sighing occasionally; breath of death-like coldness, and occasional jactitation of the arms. The clothes and bedding were saturated with blood; blood was upon the floor; and a chamber-vessel by the side of the bed contained more than five pints of coagula: (this was ascertained afterwards by measure.)

A wine-glass of gin was immediately given; brandy procured, and a dessert-spoonful given in a little warm gruel frequently.

On examination, blood was found oozing from the vagina, which was filled with coagulum. The os uteri was fairly open and dilatable: within it, and completely surrounding it, was found the placenta. No sensation of fluid within the uterus could be detected, and the firm head of a fœtus could be distinctly felt through the placenta; the uterus through the abdominal parietes was found firm and globular, and remained steadily so. Without any evidence of uterine pains: no fœtal movement could be detected, and, having no stethoscope with me, the position and state of my patient prevented my endeavoring to ascertain the existence or non-existence of the child. Without altering the position of my patient, I determined upon immediately removing the placenta, which I found attached to the anterior part of the neck of the uterus, the posterior and larger portion of the placenta being already detached, and separated from the uterus by coagulum; the separation was readily effected by passing the left hand between the uterus and placenta posteriorly, then gradually rotating the hand to the right, keeping the dorsal surface of the fingers firmly pressing against the uterus, and the margin of the placenta within their palmar surface, so that it was readily removed after its detachment by bending the fingers and withdrawing the hand; some portion of the membranes being fixed between the head and pubis, yielded during extraction, and remained behind. Hemorrhage continued during the removal of the placenta, but ceased with its removal at 5 A. M.; and no coagula formed afterwards in the vagina. The placenta was entire, of usual size; coagula were adhering to a considerable portion of its maternal surface, and its structure was to all appearance healthy. The cord was not tied or divided until some half hour after the removal. I could distinguish no pulsation in it, but found the umbilical vein enormously distended.

The poor woman was now warmer; somewhat conscious; pulse more perceptible, though very feeble—rapid, and not to be accurately counted; free from pains and hemorrhage. The uterus continued firm and globular; and, upon examination, a very firm fœtal head was found resting upon the open os uteri in the natural position.

The abdomen (which had until now been supported by hands) was encircled by a broad bandage; and as the patient dozed at intervals, the brandy and gruel was only occasionally given, and in smaller quantities.

About half past 7, slight uterine pains commenced, and gradually increased; the temperature of the patient was good; the strength of the circulation had improved, and the radial artery communicated the characteristic vibratory sensation of the hemorrhagic pulse, the number of beats varying from 140 to 150 in the minute; no return of hemorrhage.

At half past 8, pains were frequent, but not strong enough to be effective; the firm fœtal head remained fixed in the brim of the pelvis, and resting on the dilated and dilatable os. One drachm of powdered ergot was given in the form of infusion, and speedily increased the strength and frequency of the pains, but without affecting the position of the fœtal head. Shortly after 9 o'clock, not deeming it prudent to tax further my patient's power of endurance, I opened the head with a strong pair of scissors, and, with very little aid in the way of traction, the head shortly passed into the cavity of the pelvis, and was expelled with a portion of the membranes, *by the uterine efforts*, about 20 minutes past 10—more than five hours after the removal of the placenta. There was no hemorrhage after the labor; indeed, after the removal of the placenta, the fingers were not rendered more sanguineous than usual by the examinations, (excepting, of course, the effect of opening the cranium,) and the only napkin I kept applied was soiled, not soddened, by the discharge. The child (a male) was dead, well-formed, of full size, and livid.

After the labor, my patient was much better than could have been anticipated; the uterine action appeared to have rallied her most effectually; the surface of the body was not only warm, but moist; pulse 136, of vibrating character. Though not disposed to speak when addressed, she was perfectly conscious, and the uterus remained firmly contracted. The abdomen was firmly supported, and the position directed to be maintained until my next visit.

It is sufficient to state that this poor woman steadily improved; the pulse gradually diminished in frequency, and lost its character. The confusion in her head consequent on the loss of blood was her only complaint, and this, which she compared "to the constant noise and bustle of a railroad station," slowly subsided. She suffered but little, and a short time, from the distension of the mammary glands, or consequent constitutional irritation. After this, as after former labors, she had but little lochial discharge, and the after-pains were scarcely recognised. She was allowed light broths and milk, with her gruel and arrow-root, from the first, and, after a few days, tonics were prescribed, and diet further improved.

Her after-statement was, "that there had been no previous hemorrhage; that she went to bed well, and was awoke before 4 o'clock with an urgent desire to pass water; something escaped, which she supposed to be urine, before she could gain the vessel; on seating herself, there was a sudden gush of she knew not what; she felt faint, and knocked." It appears that a female in the house found her upon the vessel, leaning against the bed, insensible, and, with assistance, placed her as I found her.

In his remarks, Mr. Ray stated that he did not advocate the removal of the placenta in all cases of unavoidable hemorrhage; that he was able to add his testimony to the comparative safety of the practice, as far as the mother was concerned, in such cases alone as those related; and confessed that, until the occurrence of his first case, he did not attach to the opinions of the late Mr. Kinder Wood, Doctors Simpson and Radford, the importance that he now feels they deserve.

He was induced to adopt this practice in the second case—

1st. From having witnessed in the former case the immediate cessatio nof the hemorrhage on the expulsion of the placenta.

2d. From believing that increase of exhaustion from further loss of blood, or from emptying the uterus, might probably be fatal.

3d. From the known difficulty in turning, the uterus having lost its fluid contents, and being in a state of *tonic contraction* around the body of the fœtus.

4th. From the impression that the delivery would be difficult, even could turning be accomplished, from the firmness of the head, presumed sex of child, and the knowledge of former severe and lengthened labors when the children were small, and female.

5th. From viewing the tonic contraction (or firmness) of the uterus, as faforable to the prevention of hemorrhage after the removal of the placenta.

In alluding to the source of the hemorrhage, he stated, whether it proceeded from the uterine arteries, sinuses, or from the opened cells on the maternal surface of the placenta, individually or collectively, it was *maternal*, and was derived principally from the venous system, as the uterine arteries, from their size, tortuosity, and contractility, could not produce those awful gushes. On considering the number, size, and free communication of the uterine sinuses with each other, tracing them through the uterine plexus to the internal and common iliac veins, and finding that these veins were not supplied with valves, he could readily understand hemorrhage to any amount, though the placenta was but partially detached, the uterus being in an *atonic* state.

The principles of treatment must be directed to the restraining the hemorrhage and supporting the vital powers of the patient.

To restrain the hemorrhage, the object must be to promote and ensure uterine contraction. The means employed may differ, but they tend to the same end. When the os uteri is undilated, the introduction of a sponge tent and plugging the vagina, mechanically assist, but tend physiologically to induce, uterine contraction, as in the induction of premature labor. The rupture of the membranes brings the firm body of the fœtus into more direct contact with the lining membrane of the uterus, and induces uterine contraction, (as in the induction of premature labor, or effect of a foreign body within the uterus,) affects the course of the sinuses, and causes pressure upon the hemorrhagic source, *the placental pad intervening.* Should hemorrhage still continue, the uterus being in a state of *tonic contraction*, it appeared to him that the removal of the placenta allowed of still further contraction of the muscular structure of the uterus, and *direct pressure* upon the open vessels. His impression was that it would be madness to remove the placenta or to deliver after turning, the uterus being in an atonic state; that to *deliver or empty the uterus* of its contents, with safety to the mother, *clonic contraction* should be present, but that *tonic contraction* was sufficient to restrain hemorrhage after the removal of the placenta, the *fœtus remaining in utero.*

Uterine contraction (tonic and clonic) might be induced by external friction or pressure, mammary irritation, enemata, ergot, galvanism, &c.; but in cases of extreme exhaustion from hemorrhage, he was disposed to believe that the most powerful excitant of motor power was the presence of the firm fœtal body within the uterus, and that the induced uterine action after the removal of the placenta was not only beneficial in causing the natural expulsion of the child, and consequently diminishing the risk of after-hemorrhage, but was also of the greatest value in producing reaction from the effects of the previous hemorrhage. The vital powers to be supported by the free administration of stimulants, with nutriment.

In his concluding remarks, Mr. Ray questioned the propriety of tying the cord in these cases, as children were occasionally born alive when following the placenta, and recommended the employing an inverted bowl or small basin, with a folded napkin intervening, to insure pressure over the uterus, as suggested by Mr. Harvey, of Castle Hedingham, to prevent after hemorrhage.

Discussion on Mr. Ray's Paper.—Mr. Waterworth having inquired the author's experience as to efficacy of the secale in extreme cases of exhaustion, as in his practice the administration of it in such a state was not attended with success:

Mr. Ray replied, his experience of its use in such extreme cases was not sufficient to enable him to arrive at a correct opinion; the object of giving it, in the case narrated, was to promote that firm uterine contraction so necessary to prevent hemorrhage, and which he believed different to the clonic contraction occurring during delivery, or at the time of the expulsion of the child.

Dr. Lodge stated, that from cases similar to those under discussion that he had seen, he had come to the conclusion, that if the patient be seen early, and before symptoms of great exhaustion showed themselves, the old method of delivery by turning should be had recourse to, by which the child's life might be saved; but if, owing to extensive hemorrhage, the mother's life was placed in danger, the child's life should not be considered, and the practice advised by Dr. Simpson be had recourse to. His own experience had clearly proved the suspension of all hemorrhage on the removal of the placenta.

Dr. Lever alluded to the hemorrhage which might arise from three sources, —the uterine sinuses, the uterine surface of the placenta, and from the placenta itself: when blood flows from the placenta it proceeds from the circular sinus of Meckel, which goes round the placenta and is irregularly dilated. He then alluded to the anatomy of the uterine sinuses, of which there existed two layers, one superficial and external to the other, which is deep-seated and close to the placenta; in the one layer the sinuses run parallel, but communicate freely with each other through horizontal sinuses at right angles; in the other they also communicate freely, but obliquely, with acute angles.

Being destitute of valves, the hemorrhage takes place from regurgitation. With respect to the mode of practice in these cases, he thought Dr. Simpson had been much misunderstood, as he never had advocated the removal of the placenta in *all* cases, but only where it was necessary, from the exhausted condition of the woman, to prevent any further loss. In other cases, where the patient was seen early, and turning could be accomplished with facility, the old practice was to be preferred; such was his own belief, strengthened by experience; it was our duty to try to save both mother and child, but if the life of the former became endangered, the child's life must not be considered. In answer to Dr. Murphy, he thought the hemorrhage ceasing directly the placenta was removed, might not be owing to the part being less vascular than when the placenta occupied its ordinary place; the supply of blood to the fœtus being equally required in each case, the sinuses enlarged accordingly.

Mr. Waterworth stated, that in thirty years' practice he had never met with a case of total separation of the placenta, but several of partial separation had occurred to him; and although he had saved the patient's life by a quick delivery by the forceps, still, as this was attended by risk of injury to the maternal structures, he certainly should adopt the practice now advocated, believing it safest and best. He alluded to the practice of not tying the maternal end of the cord after the birth of the child, thus allowing some blood to escape, and believed the placenta was by such a plan extracted with greater facility.

Mr. C. Taylor alluded to the probable danger of this method in cases of adherent placenta.

Mr. Hicks alluded to a case of placenta prævia in his practice, where all hemorrhage ceased on the expulsion of the placenta, which was effected by the natural efforts, although a great loss of blood had taken place previous to its separation. He had never seen any good arise from the administration of the ergot in such cases of extreme exhaustion, or until the system had been somewhat rallied, when it was required. The plan of not applying the two ligatures he now constantly adopted, and fully agreed with Mr. Waterworth as to the greater facility with which the placenta was extracted under such a practice; nor did he consider there was any fear of hemorrhage, even if the placenta was adherent, as the contracted condition of the uterus after the expulsion of the fœtus had the effect of so compressing the sinuses as to prevent entirely loss of blood.

Mr. Ray looked upon the fact of there being no direct communication between the placenta and uterus, as quite sufficient to prevent any alarm of hemorrhage from not applying two ligatures.

Dr. Lodge fully agreed with what had been stated of the inefficiency of giving ergot when great exhaustion existed.

Dr. Lever also concurred in this; and in answer to Dr. Lodge as to the diagnosis of, and propriety of interfering in, cases where the placenta is situated near the os uteri, stated that it was the better plan to keep the patient quiet, and explain to herself and friends the nature of the case, in order that assistance should be procured on the first appearance of the labor. With respect to the diagnosis of these cases, he did not think it difficult: the altered feel, on applying the finger to the os, which was soft and cushiony, instead of being firm and hard, as in natural cases; so also, in *partial* adhesion at the anterior or posterior part of the os, the corresponding part will be soft and resilient as described: these, especially if we consider the occasional occurrence of hemorrhage, will lead to a correct diagnosis. To show the danger of non-interference in these cases, he mentioned the case of a lady under the care of an unqualified practitioner, where flooding was allowed to recur, without an examination to find out its cause, until the powers became so sunk, that when seen by Dr. Lever she was evidently dying; the placenta was early detached, but the female sunk before she could be delivered of the child.

After some remarks on the statistics of the number born alive in these cases, thanks were given to the author of the paper, and the Society adjourned.

Malignant Disease of the Clitoris.—Mr. Brooke exhibited a specimen of this disease : the subject was 45 years of age, and had been married nearly 20 years, but had never been pregnant. Menstruation had always occurred with regularity.

For several years preceding any external appearance of the disease, sexual intercourse was followed by pain in the region of the clitoris, which at last became so severe as to compel its discontinuance.

About two years since, an excrescence, attached by a pedicle, and about the size of a nut, was removed by ligature from the region of the clitoris; shortly after which, ulceration commenced at or near the point from which the morbid growth had been removed, and had gradually progressed ever since, and, previous to the operation, had involved one of nymphæ (the other had been apparently eroded) and a considerable portion of both labia, and extended downwards to within three-quarters of an inch of the urethra.

The patient was placed under the influence of mercury, and subsequently took sarsaparilla with iodide of potassium for several weeks, but without in any degree arresting the progress of the disease. The patient had latterly suffered from almost incessant pain, which rendered necessary the repeated exhibition of opiates. The pain was much aggravated by the application of escharotics.

The general health being apparently otherwise good, the removal of the morbid parts by the knife was considered advisable, although one of the inguinal glands was a little enlarged. This was accordingly done about three weeks since, the actual cautery being freely applied to the course of the clitoris, and to every point of the surface that wore a suspicious aspect. Profuse hæmorrhage followed from several small vessels, which there was much difficulty in arresting. From this cause the time of the operation was much protracted, but the patient was kept under the influence of chloroform for nearly an hour; and, when its exhibition was discontinued, she soon recovered, without any unpleasant symptom. Mr. Brooke observed, that the wound was now perfectly healthy, and nearly healed, and the patient was free from pain, much gratified at the result of the operation.

Spontaneous rupture of the Uterus before Labor. By Thomas F. Brownbill, Esq., Surgeon to the Salford Workhouse.—M. A. Glover, aged 28 years, was of rather short stature, well proportioned, and had a healthy appearance. She had been married about eight years. In ten months after her marriage, after an ordinary labor of about nine hours' duration, she gave birth to a full-grown female child, which lived about four months. Soon after labor, which I understand was quite natural, she was seized with convulsions, followed by delirium, &c., which, continuing for a week or ten days, subsequently resulted in an attack of puerperal mania, for which she was afterwards admitted into the Manchester workhouse. Here she remained about two months, and as no improvement had taken place, was then sent to Lancaster Asylum, whence, having been confined seven or eight months, she was discharged cured, and from that until the present time, has enjoyed uninterrupted good health, having been separated from her husband during most of the time since her last confinement. She again became pregnant, and was admitted into the Salford Workhouse on the 4th of November last, in order to lie in.

She stated that in the beginning of the seventh month of gestation, whilst hanging out some clothes, she received a fall, which shook her violently, but did not cause her either then or afterwards any particular pain. On the 20th of November, at 6 a. m., after having passed a restless night, with occasional slight uterine pains, she began to vomit. This was followed by several pretty strong pains, during one of which she experienced (to use her own expression) a severe crack in the back, with a feeling of something suddenly giving way in her inside, which was immediately followed by a discharge of liquor amnii from the vagina. The midwife, Mrs. Livsey, (an intelligent and experienced person,) was accordingly sent for, and was soon in attendance. She found upon examination the os uteri nearly closed, hard, and incapable of admitting the point of the finger; there was a slight discharge of a dark brown color from the vagina; the patient had vomited the contents of the stomach, and the pains had altogether subsided. Under these circumstances she left her, and found on her return at 3 p. m., that she had had no pain during her absence; the os uteri was lower down, and more yielding, though not in the least dilated, and a slight discharge of water, tinged with blood, escaped whilst making the examination. She had not slept nor felt the motion of the child since. Soon after the waters broke. A dose of castor oil was now ordered.

On visiting her the following evening, at the request of Mr. Roberts, the governor of the workhouse, I found the oil had been rejected by the stomach, and the vomiting had continued more or less to the present time, the matter at first being of a greenish yellow, and afterwards of a chocolate color; labor had not in the least progressed, the os uteri remaining as before, if anything, more contracted; had no pains; complained of being weak and poorly, and although several opiates had at short intervals been administered, she had as yet not slept, and with a feeble pulse, her countenance now began to assume an anxious expression.

Nov. 22d. About 11 a. m., she began to doze for short periods, but this state soon gave way to extreme restlessness, almost incessantly requiring her position to be altered. She now complained of severe pain in the middle of her back, and her pulse was evidently sinking. Between one and two o'clock her breathing became laborious, her finger nails turned livid, a continued gasping followed, and in this state she died.

The body was inspected, twenty-four hours after death, in the presence of several medical friends, and Mr. Roberts, the governor. The abdomen was found to contain a large quantity (about two pints) of dark-colored uncoagulated blood, probably diluted with a portion of the liquor amnii, and this being partially removed, the first object that presented itself, entirely excluded from the womb, and partially covered by the omentum and small intestines, was a full-grown male child, that had evidently been dead several days, the first stage of putrefaction having commenced. On partially removing the child, which lay with its left shoulder to the womb, a large rupture of this organ was observed, extending from the centre of the fundus posteriorly along its whole length as far as the os uteri, leaving only a narrow rim surrounding it, and through which the child had escaped into the cavity of the abdomen. The length of the opening was about seven inches, and the uterus, which seemed perfectly healthy, was well contracted over the firmly-adherent placenta.

In the above unfortunate case there are several points worthy of general notice, and which are of peculiar interest to the obstetrician. The patient was at the end of her calculation, and had a well-formed pelvis; the child was full grown, of average size, also well formed, and there existed between the two no disparity which would prevent the one easily passing through the other, supposing the presentation to be natural. From the time she first began to complain, up to her death, there was not the slightest pressure downwards; the os uteri was not at all dilated, and firmly resisted the introduction of the finger point, which effectually prevented me ascertaining the presentation of the child; nor was there any particular point or bulging perceptible in any part surrounding the os uteri, by which I could recognise its position. The os uteri projected downward a little way into the vagina, and above it seemed to lead to an obliterated cervix. Notwithstanding this state of things, from the total absence since the first commencement of anything like strong or bearing-down labor-pains, even at the time the waters escaped, it never occurred to me that the uterus had probably ruptured, which fact I first discovered at the *post-mortem* examination.

The cause of the rupture is involved in much obscurity. She had not over-exerted herself, nor had she received any bodily injury since the time she fell, and the shake the fall occasioned was not followed by any soreness, or other inconvenience. Towards the end of gestation, she was often low-spirited, and entertained a presentiment to which she often gave expression, that she should not survive the birth of her child. There was no softening of structure in the uterus, nor any indications of previous inflammation. The surrounding soft parts were healthy; the usual predisposing and exciting causes were all absent. Even supposing there was mal-position of the fœtus, that the wall of the uterus should be endangered from such trivial pains, seems surprising. The case altogether is remarkable, and it presents an instance of the least, I believe, in frequency,—viz.,—the longitudinal rupture of this organ extending from the centre of the fundus posteriorly in a straight direction, to within half an inch of the posterior centre of the os uteri.

MATERIA MEDICA AND PHARMACY.

New Vehicle for holding Camphor in Solution.—Sir **James Murray** proposed a new vehicle for holding camphor in solution in doses considerably greater and with less irritation than it had hitherto been given. He said it was known that camphor was insoluble in water, and that when given in almond emulsion, it very readily separated on the addition of water, and that the same separation took place on adding water to a solution of camphor in spirits of wine. The opinions respecting the effects of camphor were various. Some described it as a stimulant, and some as a sedative, but this difference of effect depended mainly on the quantity given. Now, he found that the fluid magnesia was capable of dissolving camphor to the extent of three grains to the ounce of the solution, and that adding water to the mixture did not cause any cloudiness or separation of the camphor. He exhibited an ounce of this solution, containing three grains of camphor, which appeared perfectly clear like water, and said, that if you add anything to the solution which was capable of withdrawing a portion of the water, such as dry common salt, a rough estimate might be formed of the quantity of camphor it contained. To show that the mixture he held in his hand did really contain the quantity of camphor stated, he added some salt, and the camphor separated and floated to the top, leaving half an inch of it cloudy. To employ camphor as a sedative, it must be given in large doses, but it is also necessary to have it perfectly dissolved, for when free it acts as a powerful stimulant. It is obvious, then, that given for this purpose it would not do to give the camphorated spirit, nor will the solution in emulsion be any better, as it readily separates from it in the stomach. We have, therefore, he observed, a menstruum in the fluid magnesia to answer better than any other hitherto known.

Mr. McCoy remarked that there was one menstruum not alluded to by Sir James, which was capable of dissolving a much larger quantity of camphor than that stated by him, and that was milk, which, in fact, was capable of dissolving something more than one-eighth of its weight.

Asphyxia and Convulsions under the Influence of Chloroform.—A young lady, ætat. 27, who has for the last three years been the subject of severe neuralgic affection of the left side of the head and face, applied to me on the 11th inst. to extract one of her molar teeth of the upper jaw of the same side under the influence of chloroform. I accordingly moistened a sponge with one drachm of "Hooper's Preparation," covering it over with a fold of lint, and at first held it for a short time at a little distance from the mouth and nostrils, and I then applied it closely over them both for rather more than two minutes without producing the desired effect. During this period, the pupils of the eyes were alternately dilating and contracting, but the pulse was only slightly accelerated, and she expressed two or three times her desire that more chloroform should be used. I, therefore, finding there was no tendency to the soporific state, added from twenty to thirty drops more upon the sponge, which, in two or three seconds, produced a rigid state of the arms and legs, with slight convulsions of the abdominal muscles. The pupils of the eyes soon became dilated to their utmost extent, and one of the most alarming states of asphyxia followed, which continued for one minute at least; the eyelids were fixed widely apart, the mouth open, and the countenance deadly pale, with a dark livid hue around the lips, altogether indicating the most death-like appearance that I ever witnessed. My partner, Mr. Garrard, who was present, immediately opened the window of the room, and then brought a bottle of the strong liq. ammon., which was the nearest restorative at hand, and held it to the nostrils, when, in a second or two, one deep inspiration took place, which was shortly followed by another; at this moment the face was instantaneously suffused with the brightest crimson, attended with the most rapid re-action of the pulse, and the patient apparently fell into a calm sleep. I now proceeded to extract her tooth, but before I could remove the instrument with the tooth from her mouth, the jaws became so firmly fixed upon it, that it was impossible to remove it for two or three minutes, during which state, the arms, the legs, and the whole body were in one continued state of the most distorted convulsions. With the greatest difficulty we depressed the lower jaw, and removed the instrument and tooth, the convulsions (though not so violent) continuing for five or six minutes longer, when she became half-conscious, and muttered, "more, more, or I cannot have my tooth out." She continued in this state, more or less, for another half hour, when she was attacked with the most excruciating pain at the top of the head, where there was much heat, and to which I applied linen rags dipped in sulphuric ether for twenty minutes, which removed the heat, and considerably abated the pain; she then reclined upon a couch for an hour and a half, and arose quite comfortable, and went home into the country. I called upon her the following day, and she only complained of great lassitude, as well as much soreness of her whole frame. She had had a pretty good night, and was in excellent spirits, and declared she would undergo the inhalation again if she required it. She described the feelings in her head in the first instance (under the influence of the inhalation) to the noise of a steam-packet just starting from her moorings, and afterwards her sensations to have been most heavenly.—*Med. Gaz.*

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Inhalation of Chloroform and Ether, with Remarks on Benzin.—(Westminster Medical Society, January 8, 1848.) Dr. Snow said, that the action of these two agents on the nervous system was essentially the same. He had on another occasion divided the effects of ether into five degrees, which might now be called degrees of narcotism, instead of etherization, to make the description applicable to other vapors. The immunity from pain did not correspond exactly with the degree of narcotism of the nervous centres, but was greater as the patient was recovering from the effects of the vapor, than in the corresponding degree, as he was getting under its influence; this was more particularly the case with ether, which he considered had superior anæsthetic effects to chloroform in proportion to the narcotism produced. When ether was inhaled, the patient sometimes completely recovered his mental faculties, whilst the insensibility to the operation continued. This curious phenomenon, he believed, had not been explained. He had an hypothesis to offer concerning it to this effect—that it depended on etherization of the nerves of sensation, which continued for some little time, on account of the ether exuding through the coats of the capillaries into the extra vascular lymph of the tissues, and requiring some time to return into the circulation, and escape by the lungs. He had met with this persistence of insensibility to the knife chiefly in young subjects, in whom, connected with the greater activity of nutrition, there was more liquor sanguinis exterior to the vessels. In the brain there was but very little at any period of life. Chloroform probably permeated the coats of the vessels less easily, and he had not met with the symptom in question during its use.

Chloroform certainly possessed the advantage of being less pungent than ether, and was therefore more easily inhaled; it had also one or two other advantages. With respect to its greater rapidity of action, this was not an unalloyed advantage. Ether produced a full chirurgical degree of insensibility in the adult in four minutes on an average; it might be desirable to shorten this period to two minutes, but not to a shorter time; not only in order to afford opportunity for watching its effects, but also on account of accumulative property in these vapors, hitherto not alluded to. The effect of them sometimes increased for twenty seconds after the inhalation was discontinued, and he thought it desirable to have six times this period, or two minutes, for producing complete insensibility, in order to avoid danger. But chloroform, when administered on a handkerchief or sponge, as recommended by Dr. Simpson, its introducer, sometimes produced complete insensibility in six or seven inspirations, as that gentleman stated. 100 cubic inches of vapor of chloroform contain 128 qrs. of the liquid, a quantity he believed more than sufficient to cause death; and yet this quantity might be contained in 700 or 800 cubic inches of air, and might be all breathed in a quarter of a minnte, by taking deep inspirations. Danger might, it was true, be probably avoided, by putting but a limited quantity on the handkerchief or sponge, but this method was not very applicable in surgical operations, as they could not tell how much would evaporate without being inhaled, and consequently would be liable to fall short of the effect. When he, Dr. Snow, administered chloroform, he seldom produced complete insensibility in less than two minutes, as he never used the water-bath at a higher temperature than 60°, and if the patient breathed deeply, he opened the valve a little to dilute the vapor still further with external air.

He preferred chloroform on the whole to ether in the cases of adults, and had given it to young children with the most satisfactory results, yet he preferred the less powerful agent in the cases of children, as chloroform acted with still greater rapidity on them than on grown people. Ether rendered children insensible to any operation in the space of two minutes, and its effects on them were extremely favorable: but it required an apparatus by which the vapor could be exhibited very gradually at first, otherwise it caused them to hold their breath, as, indeed, did chloroform. He considered that an anæsthetic agent, which could be safely administered on a sponge or handkerchief by medical men with no special experience, to all patients, young and old, was still a desideratum. He had lately applied benzin in St. George's Hospital, and its action was very efficient and favorable in four cases of tooth drawing, where its effects were only carried to the second degree; but in an amputation where narcotism to the third degree was induced, it caused some convulsive tremors, and, consequently, although it totally prevented the pain, and was followed by no ill consequences, yet it did not seem applicable to important operations. The benzin he used was prepared by Mr. Bullock, by distilling benzoic acid with slaked lime. About the same quantity as of chloroform was expended, as about a drachm was used in each of the cases of tooth-drawing, and two drachms in the amputation; but being less volatile, it produced its effects less quickly. Benzin was the same liquid under another name, as the bicarburet of hydrogen which Dr. Faraday had previously discovered and obtained from condensed oil-gas. It consisted of six atoms carbon and three atoms hydrogen, and had a rather pleasant aromatic odor. He placed on the table an apparatus which he had contrived and used for the administration of chloroform. It consisted of two cylinders placed one within the other, and partially lined with bibulous paper, which absorbed the liquid and gave it up again to the air which passed over its surface. These cylinders were enclosed in a third one containing a water-bath. The inhaler was about the size of a half-pint bottle, and when in use was suspended by means of a short tube and screws to the face-piece which formed part of his ether apparatus.

Mr. I. Brown related a case of protracted labor, in which, the pains having ceased, and the os uteri being extremely rigid, he administered at the request of the woman, a drachm of ergot of rye without any effect. Having waited an hour, he made her inhale chloroform; pains almost immediately came on, the os uteri relaxed, and the labor was quickly terminated. He had found the chloroform always produce expulsive efforts of the uterus.

Dr. Reid had seen chloroform administered by Professor Simpson to a number of gentlemen, on all of whom it took speedy effects; and though the experiments were made after dinner, the agent produced no sickness, nor any other unpleasant effects whatever. Dr. Simpson objected to all forms of apparatus, as they prevented the inhalation of a sufficient quantity of atmospheric air. He therefore preferred that the agent should be sprinkled on a handkerchief. He (Dr. Reid) had employed the chloroform in a case of delivery by forceps. It was completely successful; it had a remarkable effect in relaxing the perinæum. He had seen it successful in producing sleep in a case of mania, in which the patient had not slept for four days and nights. He alluded to the fact, that much of the chloroform on sale was impure and inert.

Dr. Ayres considered that chloroform, in its effects, more resembled carbonic acid gas than any other agent.

Mr. Greenhalgh had used chloroform in a case of delivery by forceps, with the best results. He had employed it also in a case of alarming hæmorrhage from abortion, in which the ovum could not be removed, from the contracted state of the os uteri. The chloroform had the effect of dilating the os, and allowing of the removal of the ovum. The patient did well. He had also employed it in the case of a child with convulsions from teething, with the greatest benefit; the convulsions immediately ceased, and had not since returned.

Dr. Murphy eulogized the use of the agent when administered with due care and in properly-selected cases. He had given it in the second stage of natural labor, with the most satisfactory result. He preferred chloroform to ether, as less depressing. He had noticed, when patients were under the influence of chloroform, and quite insensible, that, on introducing the hand in version, the woman appeared, on its introduction into the vagina and uterus, to struggle as in pain, but she did not recollect it afterwards.

Mr. Sibson said that he was glad to have an opportunity of expressing his thanks to Dr. Snow for the service he had done in improving the method of administering vapors, particularly that of ether, by supplying the heat that was abstracted, and thus enabling them to get a sufficient quantity of the vapor rapidly into the system. The substitution of chloroform was in a manner the carrying out of the same principle; and although he agreed in some of the cautions expressed in the paper, and admitted that chloroform might be inhaled too rapidly, yet he considered that there was no necessity to prolong the inhalation to two minutes before sufficient insensibility was induced; he thought that in this Dr. Snow was opposing his own principle. Dr. Snow had spoken, as did others, of the medulla oblongata being the only part of the nervous centres left unaffected in the fourth degree of narcotism; (a term which he approved of, as he did not agree with the French physiologists in considering the effects of ether as analogous to asphyxia;) but the medulla spinalis must be to some extent unaffected also, for the ribs as well as the diaphragm were generally moved in the respiration during the insensibility, and the muscles moving the ribs were supplied with nerves which come off below the medulla oblongata. This continued life of the respiratory function, at a time when the voluntary muscles could not be stimulated to act even by galvanism applied either directly or through their nerves, was most wonderful. He laid on the table his chloroform inhaler, which consists of his oval mask, with a place for a sponge and two valves added.

Application of Chloroform in Typhus Fever.—By Alexander Fairbrother, M. D.—An interesting case of the successful application of chloroform has just occurred in the Bristol General Hospital. The patient, a female about 18 years of age, exhibited all the symptoms of a bad case of typhus fever. The usual remedies were tried for a fortnight without any beneficial effect. The unfavorable symptoms continuing, the patient being delirious, and the system worn out for want of sleep—in fact her life was despaired of—it occurred to me that chloroform, being used in operations to produce a sedative effect, if the patient could be kept in the same state continuously, it would reduce the too rapid circulation of the blood through the lungs, relieve the difficulty of breathing, and thus become efficacious in subduing the excited state of the brain and system in such cases, or in others of an inflammatory nature. I accordingly tried the experiment, commencing with ten minims administered in a çup-shaped sponge, inclosing the mouth and nostrils, but occasionally admitting atmospheric air. About ten minutes were occupied in the inhalation. The soporific state was induced in a few seconds, and continued for about half an hour. In about four hours, the chloroform was again administered, the quantity being somewhat increased, and the inhalation was now continued for half an hour. The patient slept from this time (12) till 4. She took a little porter, and again slept till 8 o'clock. The application was then repeated, and has been continued for several days; the quantity of chloroform being gradually increased to twenty-five minims, and the time of inhalation to forty minutes, guided in these particulars by the state of the pulse.

No other medical treatment has been adopted; the only other means used being the sponging of the body with tepid water, and applying cold pads to the head. The system was supported by beef-tea, porter, wine, etc., and to allay thirst, toast and water. The patient is now recovering; the pulse is reduced from 130 to between 70 and 80; the tongue is clean and moist; the skin cool; diarrhœa has ceased; the appetite is returned, and the countenance is regaining its natural aspect.

It is a recommendation of this remedy, that, so far from its being disagreeable, the patient, after it has been administered a few times, craves for it.

Injurious Effects of Chloroform.—At a recent meeting of the Surgical Society of Ireland, Mr. Stapleton stated that he had lately tried chloroform in some cases in Jervis Street Hospital. One man was put into a sound sleep, but awoke in about a minute afterwards, and expressed himself as having been conscious of everything that was done to him; while apparently unconscious, he said that he had felt himself pinched, and so forth; but was unable to resist or give any indication of feeling. A resident pupil of the hospital had tried it a day or two ago, and was very merry during its action; to-day he again tried it, and was put to sleep in two minutes, but recovered in two minutes more, and shortly after began laughing in a hysterical manner, and soon fell into violent convulsions, so as to require the united efforts of several people to hold him down in bed; he then got rigors, cold perspirations, and sickness of the stomach; his pulse sometimes fell very low, and, when the excitement was coming on, it would rise to 100. He remained in this uncertain state for two hours, and then expressed a wish to sleep. Under the operation of the chloroform there was a complete loss of muscular power, except during the convulsions.—*Dublin Medical Press.*

Test of the Presence of Alcohol in Chloroform.—In a communication lately made to the Academy of Medicine, M. Mialhe states as the results of his researches:—

1. That pure chloroform, applied to the skin or mucous membrane, produces simple redness, without cauterization or vesication. It acquires, however, caustic properties when mixed with a small quantity of absolute alcohol.

2. That the chloroform used in medical practice, which has caused vesication of the lips or nostrils, with irritation of the bronchial tubes, could not have been pure.

3. That this chloroform contains a certain quantity of anhydrous alcohol.

The presence of this liquid in chloroform was suspected by MM. Soubeirain and Gerdy, and it has been demonstrated by analysis. The alcohol may act by combining with and coagulating the albuminous fluids of the body, and thus giving rise to the local effects of irritation.

Hence, before using chloroform vapor in surgical practice, it is indispensably necessary to ascertain whether it be pure. M. Mialhe finds that the following is a very delicate test of the presence of alcohol in chloroform. Place some distilled water in a tube or glass, and drop on it a small quantity of chloroform. The greater part sinks immediately to the bottom of the vessel, owing to its great density (sp. gr. 1·48). A small quantity floats by repulsion, but may be made to fall in small globules by agitation. If the chloroform be pure, it remains transparent at the bottom of the vessel; but if it contains only a small portion of alcohol, the globules acquire a milky opacity.—*London Medical Gazette.*

Chemical Properties of Chloroform. By Alfred S. Taylor, F. R. S.—M. Dumas gives the following account of the properties of chloroform:—It is a heavy liquid, transparent like water, having some analogy to the chloride of olefiant gas, but its density is greater and its boiling point is lower. Its specific gravity at 64° is 1·48. It boils at 1·40°, and the density of its vapor is 4·2. It is not inflammable, but it causes alcohol to burn with a yellow smoky flame. When its vapor is passed over copper or iron, heated to redness, it is decomposed, a metallic chloride results, and carbon is deposited; but, according to Liebig, no inflammable gas is evolved. It is not decomposed by potassium; some bubbles of hydrogen are evolved, but it may be distilled over the metal without change. Caustic alkalies do not decompose it, except after long boiling, when it is entirely converted into chloride of potassium and formate of potash. Alcohol and ether readily dissolve it, but it is again precipitated by water from these solutions. It dissolves phosphorus, sulphur, and iodine,—the latter does not decompose it. It may be easily prepared by distilling, in a capacious retort, one pound of chloride of lime with three pounds of water and three ounces of rectified spirit. The weight of chloroform obtained is equal to the weight of alcohol employed.—*Traité de Chimie appliquée aux Arts*, T. v. p. 594.

Before I had seen these remarks, I had undertaken some experiments on the properties of chloroform; and the results appear to me to show, that if this liquid can be cheaply produced, it may hereafter become of important service in chemistry and the arts.

The specimen of chloroform which I examined, was furnished to me by Mr. Jacob Bell, and was procured from Mr. Morson. Its specific gravity at 60° was 1·434. It was clear and colorless, perfectly neutral, had a warm ethereal taste, without any pungency, and the peculiar odor which characterizes it. A few drops placed on the skin evaporated readily, producing a great degree of cold, but no irritation. When mixed with alcohol and ether, the evaporation was accompanied by slight irritation of the skin. A few drops placed in a glass jar were very speedily diffused in a vapor. A lighted taper plunged into the vessel burnt with a smoky flame, but the chloroform itself was not in the least inflammable.

When a few drops were placed on cotton wrapped round the bulb of a spirit thermometer, and introduced into an air-pump receiver, the temperature fell in a few minutes from 60° to 10°.

It was but very slightly dissolved by *water*. When poured on this liquid, the greater part sank in globules, which had a milky-white appearance (an indication of the presence of alcohol, according to M. Mialhe): the small globules which floated sank on agitation through the liquid. It was so little soluble in water, that three drops on nine ounces of distilled water, and well shaken, did not readily disappear, although they imparted a strong odor to the liquid.*

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* According to M. Dorvault, 2000 parts of water are required to dissolve one part of chloroform.

With *alcohol* and *ether* it readily forms transparent solutions, which burn with a yellow smoky flame. Water added to the alcoholic solution causes a separation of the chloroform, which falls to the bottom of the vessel. As chloroform is less soluble in water than ether, this process of washing, if performed in a graduated tube, may serve to determine the proportion of alcohol present. The specific gravity and the boiling point, which is 140° for chloroform, and 172° for alcohol, would also enable the analyst to determine the presence of the last-mentioned liquid.

Chloroform readily mixes and combines with the *essential oil of turpentine* and *bisulphuret of carbon.*

It easily dissolves *camphor*, and the solution burns with a yellow smoky flame, having a green edge or border.

It speedily softens and dissolves *caoutchouc*, more readily when pure than when mixed with an equal part of oil of turpentine; although in the latter case the softening and solution were complete in twenty-four hours.

It dissolves *amber*, *copal resin* (with great facility), and all the common *resins* With red and black sealing-wax it makes a strong varnish. Contrary to the statement of Dumas, I did not find that it perceptibly dissolved *sulphur* or *phosphorus.*

It dissolves *white wax* and coagulates *albumen.*

It dissolves *iodine* and *bromine*, forming deep-red colored solutions, and it separates these metalloids from water. A few drops of chloroform shaken with an aqueous solution of iodine or bromine, removes either of these bodies, and the chloroform falls to the bottom of the vessel, acquiring a red color, the depth of which is proportioned to the quantity of either substance present.

It floats on concentrated *sulphuric acid*, which is only darkened by it at a boiling temperature, when the chloroform is rapidly dissipated in vapor. It slowly decomposes nitric acid in the cold, but at a high temperature deoxidation is rapid, and nitrous acid is abundantly evolved. It scarcely affects a solution of iodic acid, which acquires, after a time, only a faint pink color.

It contains no free *chlorine:* it has no bleaching properties: it does not decompose iodide of potassium, nor does it dissolve *gold*, either by itself or when boiled with concentrated nitric acid. When *nitrate of silver* was added to it, there was no precipitate,—the chloroform merely acquired that milky opacity which it had when dropped into distilled water; no chloride of silver was formed. In no respect did it possess any analogy to the salts known as chlorides.

It did not decompose chloride of gold on boiling.

It could not be made to combine with a solution of *caustic potash;* and, when *potassium* was dropped into it, the effects were similar to those described by Dumas, with the exception that the particles of metal acquired a dark incrustation, and, after two or three days, the metal had entirely disappeared, leaving a brown sediment.—*London Medical Gazette.*

TOXICOLOGY.

Poisoning by Aconitina.—Dr. Golding Bird, in relating very briefly some of the most remarkable facts connected with a case of poisoning by aconitina, stated that he was, from peculiar circumstances, not at present at liberty to allude to more than the actual symptoms presented whilst the patient was under his notice. He was anxious, however, to relate these, because they were not only very remarkable, but had not at present been recorded as the results of poisoning by the alkaloid in question; indeed, no case of this kind has been published, although several exist in which the roots and leaves of the aconite have accidentally produced death. There are few agents more likely to be employed by the secret poisoner, with greater certainty of escaping detection, than aconitina, the terrific power of which in destroying life, even in minute doses, is well known. A few days ago, Dr. Golding Bird was requested hastily to join a consultation on the case of a person holding an important position in society, and of very high intellectual attainments, who, under very peculiar circumstances, had swallowed some aconitina, which had been procured from one of the most respectable druggists in London, from a prescription of the patient's own writing, he having devoted some part of his time to the study of physic and chemistry as a part of his very extended education. From collateral evidence, it appeared probable that almost immediately after taking the poison the person must have fallen, and struck his head a severe blow against some furniture in the room. The poison, or the blow, or both, must have produced immediate violent vomiting, as the room was flooded with vomited matter. How soon he was discovered after this event was not clear, from the peculiar circumstances in which he was placed. An excellent and most intelligent surgeon, and shortly after a physician, were called to him; and about two o'clock in the afternoon, which must at least have been eight hours after taking the poison, Dr. G. Bird met these gentlemen. The patient was then fearfully collapsed; the surface cold and sweating; quite pale; the heart's action scarcely perceptible; pupils acting to light; no paralysis whatever either of sensation or motion. Notwithstanding the intense exhaustion, the intellect was unimpaired. The most prominent symptom was the repeated and terrific vomiting of a brownish fluid. This vomiting was, however, peculiar, and perhaps hardly deserved that title, the patient really being seized with a kind of general spasm, during which he convulsively turned on his abdomen, and with an intense contraction of the abdominal muscles, he jerked out, as it were, the contents of his stomach, with a loud shout, depending, apparently, on the sudden contraction of the diaphragm. These exhausting and distressing symptoms had recurred every minute or two. On attempting to make him swallow any fluid, a fearful spasm of the throat took place, producing the distressing effects so well known in the hydrophobia from the bites of rabid animals: this was not produced by the sight of water; but the convulsive movements of the body, and emptying of the stomach, were excited by abruptly touching him. He was placed in a hot bath, and afterwards removed to bed, covered with blankets, a large mustard poultice applied to the scrobiculus cordis, and an enema of turpentine administered. He remained in much the same state, the sedative effects of the poison on the heart gradually lessening, so that at nine o'clock the pulse was easily perceptible, although weak; the hydrophobic spasms were, however, then produced by every attempt to swallow, so that none of the medicines suggested for him could be made use of. It was therefore determined merely to administer enemata of beef-tea, with the yolk of an egg, and ten minims of laudanum, chiefly with the intention of procuring rest and giving support. He had a fearful night of exhaustion and spasm; intellect perfect, and even vivid, so as to enable him, whenever he recovered a little from his exhaustion, to carry on a conversation in the French language with an excellent and distinguished clergyman, who shared the task of soothing and watching him with his zealous surgeon. After this hard struggle with death, this very remarkable man emerged from the effects of the poison; and at two o'clock on the following day, when another consultation was held, he was regarded as convalescent. Dr. Golding Bird drew attention to the fact, that although at least two grains and a half of aconitina had been swallowed, yet that the majority of the poison must have been got rid of during the vomiting which followed the injury to the head, resulting from the fall. He also pointed out the remarkable train of symptoms developed, especially the convulsive vomiting and imperfect hydrophobia, as possibly being characteristic of the effects of the poison. For although they differed importantly from the effects of aconite root, with the exception of the sedative influence on the heart, still it must be recollected that such difference becomes intelligible when it is recollected that a pure alkaloid often differs materially in its physiological action from that of the plant from which it is an extract, as shown remarkably in the case of the alkaloid conia.

Lead from Urine and Expectoration of a Man affected with Painters' Colic.—Mr. James Ogden Fletcher, through Mr. John Fletcher, presented globules of lead, obtained from the urine of a man aged 33 years, suffering from painters' colic; and he also detailed the results of an analysis of the expectoration of the same individual, proving the presence of lead in the sputum.

Urine.—One thousand parts of urine evaporated gave 71·5 of solid residue; this, after incineration, yielded 13·5 salts. A stream of sulphuretted hydrogen passed through the aqueous solution of these salts, threw down sulphuret of lead in quantity sufficient to afford three and a half grains of metallic lead. In this solution, likewise, prussiate of potash and infusion of galls indicated the presence of peroxide of iron.

Sputum.—One thousand parts of expectorated matters left, after calcination, 9 of salts. A stream of sulphuretted hydrogen passed through the aqueous solution of these salts, precipitated sulphuret of lead. This was re-dissolved by dilute nitric acid, and tested by iodide of potassium, bicromate of potash, and sulphuretted hydrogen, which proved satisfactorily the presence of lead. Prussiate of potash threw down a blue precipitate, indicating the presence of iron, which was further proved by other reagents.

The patient for several years had suffered an annual attack of lead colic, and with the three last attacks had the dropped hand. He worked in a lead-mill, and was engaged in the process of "flatting," in which white lead dissolved in naphtha is plentifully used. On this occasion the colic came on suddenly; the paralysis was considerable; and the blue line on the gums strongly marked.

A subsequent analysis, made two weeks afterwards, when the paralysis was less, and the blue line on the gums less strongly marked, showed a diminution in the quantity of metallic lead in the urine, one-fourth.—*Mr. Fletcher in Med. Gaz.*

Arsenic in the serosity of a Blister. Consequent on Poisoning by that substance.—New Method of detecting Poisoning.—M. Legroux, physician to the hospital at Beaujon, was called to attend a young woman, who, the evening before, had taken arsenic, with the intention of poisoning herself, and being subject to the most alarming symptoms, refused to give any account as to the cause of her sickness. The product of the vomitings and stools were lost, and the urine was very scanty. M. Legroux, reduced to treat her for the symptoms, applied a large blister. The abundant serosity which was accumulated under the epidermis he collected, and confided to M. Chatin for analysis, to whom also he sent the urine which the patient passed.

After destroying the organic matter of the serum and urine, M Chatin dissolved the residue in distilled water, and introduced it, after some unsatisfactory trials, into Marsh's apparatus. The urine, weighing thirty-two drachms, furnished an arsenical ring, and spots sufficient to cover entirely two plates of porcelain. The residue of the serum of the blister, although weighing only fifteen drachms, gave sixteen plain spots of arsenic, and a good number of slight stains. This serum, at the time it was examined, was of an amber color, saltish taste, (nitrate of silver gave an abundant white precipitate insoluble in nitric acid), and a manifest alkaline reaction.

This fact suggested to M. Chatin a very proper idea, at least so it seems to us, that from this can be deduced a useful agent in the diagnosis of poisonings, and in some cases in the search for poisonous substances in the serous humor and cutaneous excretions. In effect, when the urinary secretion fails, as sometimes happens in the violent period of poisoning when the digestive tube does not contain, or does not give off any suspected matter, there will remain with the physician to prove his diagnosis, the resource of provoking the serous secretion of the skin, and seeking from this secretion the knowledge which he wants to treat the patient rationally.—*Journal de Chimie Médicale et de Toxicologie*, June, 1847.

OBITUARY.

Died, at his residence in White-street, on the 17th of March, John Stearns, M.D., late President of the New-York Academy of Medicine, aged 78.

Dr. S. was a native of Wilbraham, Mass., and graduated at Yale College in 1789. About the year 1811, he was elected to the senate of the State of N. Y., and became an active member of the Council of Appointment. For more than twenty years he was an efficient member of the Vestry of St. George's Church, in Beekman-street. He was also one of the founders of the American Tract Society, and for more than ten years was Chairman of its Finance Committee. In every relation of life he was "*sans peur et sans reproche.*"

In the death of Dr. Stearns, the profession has lost one of its ablest and most respected members, and society one of its brightest ornaments. Through a long life of usefulness and devotion to the active duties of his profession, Dr. S. has ever maintained an unblemished character, and a high reputation for skill, learning, and talent. To him the science of medicine is indebted for the introduction of ergot into obstetrical practice,—undoubtedly one of the most important discoveries of the age. Dr. Stearns has filled with great credit many important places of honor, such as State Senator, President of the New-York State Medical Society, and President of the New-York Academy of Medicine; in which capacity he won new laurels for his zeal and devotion to the interests of science and the profession.

We understand that his disease was malignant erysipelas, contracted by attendance upon a patient laboring under the same affection. It belongs to the Academy of Medicine to do honor to the memory of one of its most illustrious members; and this, we doubt not, will be done in no stinted measure.

These remarks are written as the Journal is going through the press, which, we trust, will serve as an apology for so brief and imperfect a notice.

Died, in New-York, on the 2d of March, Eugene F. Hutchinson, M.D., one of the Physicians of the New-York City Dispensary.

It is with a heavy heart that we record on our pages the decease of our young, talented, and amiable friend. We first knew him as a student of medicine at Geneva College, in 1844-5, where he attracted our particular notice for his intelligence, as well as his great zeal and devotion to study. Kind and amiable in his deportment, gentlemanly in his manners, and ingenuous in all his conduct, he won alike the respect and friendship of pupils and teachers. After graduating, he removed to this city, where he commenced practice with every prospect of ultimate success, as a Dispensary Physician. He was devoted to and beloved by his patients, ardent in the pursuit of knowledge, honorable in all his deportment. He was rising rapidly in the estimation of the public, as well as the profession, and he fell a victim, after a short illness, to fever contracted at the bed-side of a patient. Had our friend lived, he would have achieved fame, reputation, and wealth; he lived long enough to acquire what are of, perhaps, more real value—the love, admiration, and friendship of all who enjoyed his acquaintance.

Died, in the amphitheatre of the Hospital of Berlin, the celebrated Prussian Surgeon, Dieffenbach, of apoplexy, immediately after his lecture, on the 11th of November, 1847.

On the 4th October, in London, John Morgan, for twenty years lecturer on surgery in Guy's Hospital.

Died, in London, December 7th, in the 53d year of his age, Robert Liston, Esq., well known as one of the most eminent surgeons of our day. His disease was aneurism of the aorta at the origin of the innominata.

Died, recently, aged 72, the celebrated Burdach, author of a well-known work on Physiology, and Professor in the University of Königsberg.

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On Disorders of the Cerebral Circulation and of the Connection between Affections of the Brain and Diseases of the Heart. By **Geo. Burrows**, M. D., etc., with Colored Plates. Philadelphia: Lea & Blanchard, 1848, 8vo. pp. 216. - *ib.*

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Art. XIII.—The Lungs—their Uses and the Prevention of their Diseases; with Practical Remarks on the Use of Remedies by Inhalation. By James Stewart, M. D., etc. Wm. H. Graham. 12mo. pp. 100. - - - - 360

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Art. XVIII.—On the Theory and Practice of Midwifery. By Fleetwood Churchill, M. D., with Notes and Additions, by R. M. Huston, M. D., etc. 3d American Edition, revised and improved by the author. With illustrations. Philadelphia: Lea & Blanchard, 1848, 8vo. pp 251. - *ib.*

Art. XIX.—Obstetric Tables. Comprising graphic Illustrations, with descriptions and practical Remarks: exhibiting on Dissected Plates, many important subjects in Midwifery. By G. Sprall, Surgeon Accoucheur. First Am. Edit., carefully revised, and with additional Notes and Plates. Philadelphia: Thomas, Cowperthwaite & Co. 1848. 4to. - - 365

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Practical Observations on Certain Diseases of the Chest, and on the Principles of Auscultation, by Peyton Blakiston, M. D., F. R. S., etc. Philadelphia: Lea & Blanchard, 1848. (From the Publishers.)

On the Blood and Urine, by John William Griffith, M. D., F. L. S., etc., G. Owen Rees, M. D., F. R. S., F. G. S., etc., and Alfred Markwick, M. D., etc., in one volume. Philadelphia: Lea & Blanchard, 1848. (From the Publishers.)

Nineteenth Annual Report of the Inspectors of the Eastern State Penitentiary of Pennsylvania—Transmitted to the Senate and House of Representatives. March, 1848. Philadelphia: Ed. Banington and Geo. D. Haswell.

Report of the Visiting Physicians of the Lunatic Asylum on Blackwell's Island, to the Board of Aldermen of the City of New York. (From Dr. G. McDonald.)

Summary of the Transactions of the College of Physicians of Philadelphia, from Dec. 1847 to March 1848, inclusive. (From the Society.)

The Character of Rush, an Introductory to the Course on the Theory and Practice of Medicine, in the Philadelphia College of Medicine. By Thomas D. Mitchell, M. D., Prof. Theory and Practice, etc. Published by request of the Class. Philadelphia: John H. Gihon, Printer. (From the Author.)

Valedictory Address to the Graduating Class of the Philadelphia College of Medicine, March 3d, 1848. By Henry Gibbons, M. D., Professor of Institutes and Practice of Medicine. Published by request of the Class. Philadelphia: John H. Gihon, Printer. (From the Author.)

Elements of General Pathology; a Practical Treatise on the Causes, Forms, Symptoms and Results of Diseases. By Alfred Stillé, M. D., Lecturer on Pathology and the Practice of Medicine; Member of Med. Soc. of Observation, Paris; Fellow of the Philadelphia College of Physicians, etc. Philadelphia: Lindsay & Blakiston, 1848, pp. 483. (From the Publisher.)

Practical Hints on the Prevention and Treatment of Diseases of the Lungs. By James Stewart, M. D. New York: W. H. Graham. 1848. (From the Publishers.)

A Dispensatory and Therapeutical Remembrancer; Comprising the entire lists of Materia Medica, Preparations and Compounds, with a full and Distinct Version of every practical Formula, as authorized by the London, Edinburg, and Dublin Royal College of Physicians, in the latest editions of their several Pharmacopiæs; to which are subjoined copious relative tables, exemplifying approved forms under which compatible medicines, &c., may be extemporaneously combined, &c. &c. &c.: By John Mayne, M. D., L. R. C. S., Edinburgh. Revised; with the addition of the Formula of the United States Pharmacopæia, &c., by R. Egglesfield Griffith, M. D., Author of "Medical Botany," &c. 12mo., pp. 329. Lea & Blanchard: Philadelphia: 1848. (From the Publishers.)

Notes on the Theory of Human Existence. Comprising remarks on Vitality, the Mind, and incidentally the Soul; the whole being an exposition of the Nature, Powers, and Destiny of Man. By Thomas L. Wright, M. D., Cincinnati. 1848. (From the Author.)

An Address, delivered at the Castleton Medical College, Introductory to the Spring Session of 1848. By Joseph Perkins, M. D., Prof. of Materia Medica and Obstetrics. (Published by the Class.) 1848. (From the Author.)

Elements of Natural Philosophy: being an Experimental Introduction to the Study of the Physical Sciences. By Golding Bird, M. D., F. R. S., Fellow of the Royal College of Physicians; Prof. of Mat. Med. at Guy's Hospital, &c., &c. With 372 Illustrations. From the Revised and enlarged 3d London Ed. Philadelphia: Lea & Blanchard. 1848. 12mo. pp. 402. (From the Publishers.)

Indenties of Light and Heat of Caloric and Electricity. By C. Campbell Cooper. Philadelphia: Grigg, Elliott & Co. 1848. 8vo. pp. 90. (From the Publishers.)

Principles and Practice of Surgery. By the late George McClellan, M. D., Edited by his son, John H. B. McClellan, M. D. Philadelphia: Grigg, Elliott & Co., 1848. (From the Publishers.)

The Young Stethoscopist: or the Student's Aid to Auscultation. By Henry J. Bowditch, M. D., 2d Edition. New York: S. S. & W. Wood, 1848. (From the Publishers.)

A Descriptive Catalogue of the Anatomical Museum for the Boston Society for Medical Improvement. By J. B. S Jackson, M. D., Curator of the Museum, Professor of Pathological Anatomy in Harvard University. Boston, 1847. (From the Society.)

On the Theory and Practice of Midwifery. By Fleetwood Churchill, M. D., etc. With Notes and Additions. By R. M. Huston, M. D., etc. 3d American Edition, Revised and Improved by the Author. With 128 Illustrations from Drawings by Bagg and others, engraved by Gilbert. Philadelphia: Lea & Blanchard, 1848. (From the Publishers.)

Obstetric Tables, Comprising Graphic Illustrations. With Descriptions and Practical Remarks; Exhibiting on Dissected Plates many Important Subjects in Midwifery. By G. Spratt, Surgeon-Accoucheur. 1st American Edition, from the 4th and greatly improved London Edition. Carefully Revised, and with Additional Notes and Plates. Philadelphia: Thomas, Cowperthwait & Co., 1848. (From the Publishers.)

A Descriptive Catalogue of the Anatomical Museum of the Boston Society for Medical Improvement, by J. B. S. Jackson, M. D., Curator of the Museum, etc., in Harvard University. Boston: W. D. Ticknor & Co. 1848. 12mo., 300 pages. (From the Publishers.)

Transactions of the Medical Society of the State of New York. Vol. 3, 8vo. 84 pages. Albany: 1848.

Since March we have received the following in Exchange:—

The London Medical Gazette, for February and March.
———— Lancet, for April.
The Provincial Medical Gazette, for February and March.
The Dublin Medical Gazette, for February and March.
The London and Edinburgh Monthly Jour. of Med. Sciences, for February.
The Medical News and Library, for March and April.
The Philadelphia Medical Examiner, for March and April.
The Buffalo Medical and Surgical Journal, for March.
The New Orleans Medical and Surgical Journal, for February and March.
The Western Journal of Medicine and Surgery, for March and April.
The Southern Journal of Medicine and Surgery, for March and April.
The American Journal and Library of Dental Science, for April.
The Western Lancet, for March and April.
The Missouri Medical and Surgical Journal, for March and April.
The New York Dental Recorder, for March and April.
The American Journal of Insanity, for April.
The Charleston Medical Journal and Review, for March and April.
The New Jersey Medical Reporter, for March and April.
The British American Jour. of Med. and Phys. Science, for March and April.

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THE NEW-YORK JOURNAL OF MEDICINE.

FOR MAY, 1848.

PART FIRST.

Original Communications.

Art. I.—*Hygeology and its Relations to Vital Statistics.* By the late Samuel Forry, M. D.[*]

As the exposition of the laws of population, determined by that branch of statistics termed *Vital*, is the leading design of this treatise, it would seem accordant with a judicious arrangement of the subject to prepare the reader, in the first place, by laying before him a condensed view of Public Hygiène or State Medicine. To him who has made the subject either of political economy or of the philosophy of health his study, the inseparable relation of Vital Statistics and State Medicine—the modification in the former induced by the latter—is sufficiently obvious. Fortunately, the study of the human frame in its healthy relations, that is, anatomy and physiology, has, of late years, become a branch of general learning; and hence the public mind is correspondently prepared for a more just appreciation of the vital laws to be developed in the following pages. Nor will the facts thus presented fail to find interest in the breast of every individual, in proportion as the preservation of health, the enjoyment of happiness, and the attainment of longevity, are objects of human desire.

All our results will clearly lead to the irresistible conclusion, that if in God's government of the affairs of men, there is one truth more plainly written than another, it is, that in proportion as civil liberty and virtue prevail, in proportion as the laws are just, securing the greatest good of the greatest number, and the people are industrious and enlightened, will man be exempt from disease, his life be longer, and his happiness greater. At the same time will the higher mortality of the lower classes in all countries be brought to view; and in teaching the poor man how to be healthy, he will, to the same extent, be taught how to be virtuous, prosperous, and contented. Hence, in the execution of this design, the aims of the Christian and the patriot will be promoted.

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[*] The late lamented Editor of this Journal, Dr. S. Forry, left an elaborate work in manuscript behind him, entitled "Vital Statistics.—*The Development of Man's Faculties, and the Laws of his Mortality and Reproduction, viewed in their relations to Hygiology or State Medicine.*"

The work having been entrusted to our care to edit and bring before the public, we submitted it to the examination of the Hon. Albert Gallatin, who expresses a very high opinion of its merits, and strongly advises its publication. We have, however, endeavored in vain to find a publisher who was willing to assume the expense of bringing it out; there therefore remains no other way but to publish it by subscription, which, at no distant period, we design to undertake. In the meantime, we present our readers, as a sample of the work, a portion of the first chapter, which will give a tolerably correct idea of the whole.—Ed. Jour.

The study of medicine, as now cultivated, is the study of human nature. It is not limited to isolated man—to man as an individual; but, impelled by more noble aspirations, it spreads the wings of its solicitude over all society—over man regarded as a people. It is the concentration of moral, intellectual and physical science, upon the moral, intellectual and physical advancement of the human family: and, as the medical profession now, for the first time in the history of man, stands unshackled either by the monarch or the priest, and devoted solely to the best interests of humanity, it behooves them to place themselves collectively in the same relations to society, as individually they now stand toward their patients. Modern civilization has not a few gordion knots; and to untie these, the application of medicine as a science, as it is at this time illustrated in the Registration of England, is of surpassing importance. Indeed, there are no questions concerning humanity, ay, some of the most profound political questions of modern times, which the study of medicine may not assist to solve. What a noble theme is thus presented for investigation!—a theme whose subject is population, and whose end is public health!

CHAPTER I.

THE NATURE AND OBJECT OF HYGIOLOGY.

State Medicine, Medical Police, Public Hygiène, and Hygiology, the last two being derived from ‘υγιεια, health, with the addition of λογος, a discourse, to the latter, are terms employed synonymously to express both the science and the art; the object of which is, to determine the influence of all physical and moral agents upon healthy man, and thus to apply the principles of medicine to the securement of the well-being and the amelioration of the condition of society. The term Hygiology, which is now coming into general use, is a very appropriate one, and so is that also of State Medicine, as used by the Germans, which includes the department known under the names of Legal or Forensic Medicine, or Medical Jurisprudence. By these last terms is understood the application of medical knowledge to the elucidation of doubtful questions in courts of justice; but by some authors, this last is so extended as to comprehend all the foregoing, that is, all medical knowledge that may prove useful to the legislature or the magistracy.

The object of the science of medicine, it may be further remarked, is not alone the cure of diseases: but it has, as will be seen, the most intimate relations with the social organization. As its aid is not unfrequently invoked in the enactment of laws, in enlightening the magistrate in their application, and in maintaining the public health, its application thus has been designated *public hygiène and legal medicine.* Hence, hygiology embraces in its province all that relates to boards of health, to epidemics, endemics, epizootiæ, vaccination, quarantine, hospitals, lunatic asylums, the relief of the sick poor, sewerage and drainage, the supply of water to towns, the health of prisons and of emigrant ships, and the inspection of factories; which last is a terrible evil, from which the United States is fortunately wholly exempt. These subjects are here enumerated as the ordinary objects of legislative action in England, France, Germany, etc., and also to some extent in our own country; but it is only as medical science became more cultivated in quite recent times, that there has been any system in these hygiènic enactments. There are, however, many other similar philanthropic objects. We find, for example, that the insalubrity of certain arts and trades has been materially diminished by such inquiries; and as, taking the whole result of these investigations, the mean duration of life among the laboring classes has been by this means augmented, which is, in other words, diminishing crime and emptying prisons, it follows, that the morals of this class are at the same time improved and their comforts increased.

Nor is legal medicine, in view of the grave importance of the questions pertaining to its domain, of less consequence than public hygiène. Based upon the principles of medical science and its collateral departments, the physician is often called upon to decide such questions, as the degree of development of the fœtus and its viability—the nature of wounds, their cause, and their necessary and probable result—the identity of individuals, mental alienation and its attending actions, poisoning, death and its verifications, the period of its occurrence, and its certain or presumable causes; and hence, upon his conclusions will consequently depend the liberty, the honor, the fortune, the life of a fellow being. But medical police is too apt to be regarded by the mass as nothing more than the mere removal of an ostensible nuisance—the burying of a dead horse, or the filling up of an offensive puddle; or at most, as the doings of Boards of Health, heard of when cholera or the yellow fever prevails, whether in reality or imagination, and which many consider to be merely fear-spreading contrivances. It is in Germany and France alone, but more especially in the former, that hygiology is cultivated as a science. England has just begun the cultivation of state medicine; while in this country it can scarcely be said, notwithstanding its immediate relation to the preservation of the health of the whole community, to be recognised as a study.

The site and erection of gas-works and of slaughter-houses, it is true, often become the subject of litigation; but as the medical witnesses themselves generally come to the examination of the question unprepared, the jury are only puzzled by the contradictory medical testimony, and thus the verdict, as regards the question of the depreciation of property, is a mere matter of chance. The loose manner in which medical men, called before courts of justice, express themselves, is actually, however ungracious it may seem to make the declaration, a disgrace to the profession. It may happen that certain artisans of a particular class may die in rapid succession; but as workmen are never wanting, who cares to undertake the trouble of instituting an inquiry into the cause of the unwholesomeness perhaps of a manufactory? As regards food and drink, they may be supplied for years of a very bad quality to a city, with perfect impunity, save to the consumer; and thus too crowded and unventilated courts may arise in the very heart of our largest towns, endemics and epidemics may appear and disappear, while the lessons which they teach are never treasured up for the public benefit. Although it is well known that wherever want and misery abound, there sickness and early death, with every indication of physical and moral degeneration, necessarily exist; yet large portions of the most intelligent part of the community are needlessly exposed to removable physical conditions, which tend not only to render life wretched and inefficient, but to diminish its duration. Indeed, it is the nature of man to give little heed to remote and contingent danger; but when it comes near—when pestilence knocks at the door—then it is that precautionary measures are adopted, in fear and in haste, to ward off the threatened invasion. It is on these occasions that the most deplorable ignorance is evinced by the great mass of the community; and even those who should be the expounders of the laws of epidemics, are apt to give forth opinions that are less calculated to inspire confidence than to excite alarm. More oracular than wise, some physicians, on the supposed appearance of yellow fever, for example, in our own city, raise the cry of contagion, which, as it necessarily creates a panic, is of itself a most efficient cause of disease.

The city of Paris, for the last forty-five years, has enjoyed the advantage of a council of health, *conseil de salubritè*, which at first consisted of but four members, and subsequently of seven. The duty of these members at its early establishment, was limited to an examination of adulterated liquors, of unwholesome manufactories and workshops, and of epizootic diseases, or those which are epidemic among animals; and subsequently, the direction of public charities and the visiting of prisons fell to their duty. When the number was increased to seven, the sphere of their labors was still further extended. It now embraced the inspection of markets, cemeteries, dissecting rooms, slaughter-houses, privies, public baths, drains, pits, collections of manure and filth, etc. The treatment of epidemics was now also confided to them; and it was required of them likewise, to attend to the tables of mortality, and all other medical statistics; to take measures to repress quackery; to institute inquiries with the view to render workshops and public places wholesome, to determine the best methods of warming and lighting, etc., etc. These multiplied duties were attended to with so much zeal, that, in the course of fifteen years, the number of reports made was not less than 4,330.

It was correctly remarked by M. Parent-Duchatelet, who was the prince of hygiènists, that a sufficient preparation for the duties of a member of this board is not afforded by an ordinary medical education. They demand a knowledge of general physics, which is seldom possessed by the medical practitioner, and a practical acquaintance with the precise effects of trades and professions, and also of manufactories, on the health of those engaged in them, and on the health of the masses collected in cities, as well as on animals. Thus an acquaintance with the greater number of the particular processes of each trade, becomes necessary. Even a knowledge of the geology of the locality and of the physical character and constitution of the soil, is required.

Parent-Duchatelet was a man thus accomplished; and it is to be feared that it is only in countries having councils or commissions supported by government, that public hygiène will be thus made a special study. Renouncing the practice of medicine, in which he had fair hopes of a bright success, M. Duchatelet devoted the last fifteen years of his life to the prosecution of public hygiène in Paris—a calling which, though dangerous, repulsive, and even disgusting, proved of the first importance to the health of that city. He traversed and examined almost every sewer in Paris, and visited its most infected spots of impurity and filth. In his own words: "J'ai surmonté sans hesiter la repugnance et les dangers inseparable de pareilles recherches; j'y ai sacrifié mon temps, et mon argent, et ma peine; je ne puis dire les demarches que j'ai faites, les fatigues que j'ai eprouvées, et les contrarieté de tout espece qu'il m'a fallee endurer." M. Duchatelet was thus a public benefactor, and perhaps the only man that ever devoted his life to public hygiène, upon which he published thirty memoirs and reports. He died at the early age of forty-five, when he left completely finished his greatest work on public hygiène—*De la Prostitution dans la ville de Paris*—which cost him more than eight years of incessant study—a monument of the extraordinary industry of its author.

In Great Britain, hygiène has not usually formed part, as a distinct branch, of the curriculum of medical studies; and as our literature is, in a great measure, derived from England, little attention has been paid to it in this country, save the detached notices which it receives from the different practical chairs. Formerly, in the University of Maryland, when Prof. Dunglison, who has written on this subject, was attached to that institution, it was part of the duties assigned to his chair. On the continent of Europe, however, public and private hygiène, as a distinct chair, has been long taught, the former being understood as already defined, and the latter as comprising only that which relates to man individually. But the value and importance of studies of this kind early attracted the notice of our distinguished countryman, Dr. Rush, who, in an introductory lecture, in 1810, in the University of Pennsylvania, spoke in the following eloquent and impressive language: "To animate you to apply to the study of all the subjects enumerated in the introduction to our lecture, I beg you to recollect the extent of the services you will thereby be enabled to render to individuals and the public: fraud and violence may be detected and punished; unmerited infamy and death may be prevented; the widow and the orphan may be saved from ruin; virgin purity and innocence may be vindicated; conjugal harmony and happiness may be restored; unjust and oppressive demands upon the services of your fellow citizens may be obviated; and the sources of public misery in epidemic diseases may be removed, by your testimony in courts of justice."

From a neglect of the conditions appointed by Divine Wisdom, as requisite for the protection of man from disease, millions perish annually, while millions more are in a state of unceasing suffering. "The annual slaughter in England and Wales from *preventible* causes of typhus which attacks persons in the vigor of life, appears to be double the amount of what was suffered by the allied armies in the battle of Waterloo. It will be shown that diseases such as those which now prevail on land, did, within the experience of persons still living, formerly prevail to a greater extent at sea, and have since been prevented by sanitary regulations; and that when they did so prevail in ships of war, the deaths from them were more than double in amount of the deaths in battle.* For the future development of its frame, the infant, from the moment of birth, is almost wholly dependent upon external circumstances; and although this general law will be fully illustrated in the sequel, yet the fact may be here referred to, that in the work-houses of London, about a century ago, the astounding result of 23 deaths in every 24 infants under one year of age, was presented; but this proportion of mortality was speedily reduced from 2600 to 450 in a year, upon the adoption of an improved system of management. At the present day, at Manchester, England, ten out of every seventeen die before the age of five years is attained. In our own Atlantic cities, as will be seen, infant mortality is also fearfully great. According to Dr. A. Combe, one infant in every ten, at the present time, perishes within a month of its birth. The mortality from consumption, according to the Registrar-General of England, is greater among women than men. "The higher mortality of English women by consumption," says Mr. Farr, in his letter to the Registrar-General, p. 73, 1841, "may be ascribed partly to the in-door life which they lead, and partly to the compression, preventing the expansion of the chest, by costume. In both ways they are deprived of free draughts of vital air, and the altered blood deposits tuberculous matter with a fatal, unnatural facility. *Thirty-one thousand and ninety* English women died in one year, of this incurable malady. . . . . Will not this impressive fact induce persons of rank and influence to set their countrymen right in the article of dress, and lead them to abandon a practice which disfigures the body, strangles the chest, produces nervous or other disorders, and has an unquestionable tendency to implant an incurable hectic malady in the frame? Girls have no more need of artificial bones and bandages than boys."

On the other hand, the daughters of the poorer classes, when as dress-makers they are confined all day and part of the night in crowded and ill-ventilated apartments, are deprived of that vital air and bodily exercise which are essential to a healthy state of the human frame. "It is not doubted," says Mr. Chadwick, "by medical witnesses, that one third at least of the healthful duration of human life amongst milliners, dress-makers, and tailors, will be found to be destroyed by ignorance of the want of ventilation."

Against the preposterous custom of tight-lacing, whether in the shape of the old stays or the modern corset, medical men have never ceased to remonstrate. The compression of the chest and abdomen of females is at this day far too general; so much so, indeed, that the ribs of the majority of our modern belles are deformed by tight-lacing. Now the general form of a well-made female, unlike the figure of the male, which has the greatest breadth across the shoulders, represents two cones, united by their bases about the hips—a difference of general form that finds a happy illustration in the contrast of the Venus de Medici and the Apollo Belvidere. As the widest part of this ancient unsophisticated female chest is at its lowest part, while that of the modern beauty, in which whalebone and tight-lacing have done their worst, is changed into an inverted cone, it is easy to understand that this diminution of the cavity of the thorax induces consumptive diseases. At the same time, as the stomach, liver, and other abdominal viscera are excessively depressed, not only is the function of digestion impaired, but the perils of maternity are vastly augmented. And here we cannot pass by the additional causes, to which, in the higher classes, the health of girls is too often sacrificed—those "eternal" accomplishments, which, with small benefit to the intellect, inevitably dwarf the moral and physical attributes. "Few are acquainted," says the distinguished Dr. James Johnson, "or capable of becoming acquainted, with the baneful consequences of this system; but many are doomed to feel them. The poisoned arrow, in this case, leaves no wound; but the venom meanders slowly through the veins, and effects its destructive work unseen and unknown! What but evil can be expected from a system of education which enervates the mind and enfeebles the body—which polishes the external *senses*, and leaves the intellect a prey to rust and moth—which excites the imagination and obtunds the judgment—which, to speak out plainly, fosters mere *animal feeling* and discourages *moral sense?*"

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* Report on the Sanitary Condition of the Laboring Population of Great Britain. By Edwin Chadwick, Esq., Barrister at Law, and Secretary to Board of Poor Law Commissioners. London, 1842.

Less prolonged study, at least fewer hours to music, and more to properly adapted bodily exercise, would send young ladies forth to the world, at once better instructed and more healthful, and thus much better qualified to perform the high and sacred duties of their natural destiny.

It is not, however, our intention to dilate upon the highly important subject of physical education, notwithstanding it is a theme that has the closest relations with man's hygiènic condition; but it will not be without advantage to advert to those general principles by which may be insured that greatest of earthly blessings, *a sound mind in a sound body.* Between man and the external world, there exist certain definite and immutable relations; and so obligatory is the observance of these laws, that their infringement is invariably followed by the terrible penalties of disease and death. These natural laws by which man is connected with external objects, have been appropriately classed under the three heads of the physical, the organic, and the moral. The laws of matter and motion, it is true, are somewhat modified by vitality; but the human body never ceases to be under the influence of physical laws. By organic laws are meant such as are peculiar to organization, with which life is always found connected. Man is also a moral and intellectual being; and although these higher powers pertain to his spiritual nature, yet are they dependent on organized structure for their manifestation. So intimate is the connection among these several functions, that they are mutually influenced by each other's derangement. If bodily health becomes impaired, the mental powers, which are manifested only through organized structure, also languish; while the moral feelings are sure to be acted on unfavorably, by that irritability of mind, to which ill health is prone to give rise.

As it is by the processes of digestion and respiration that the animal body obtains the elements of subsistence, it is thus more immediately connected with external nature; and as food and air are indispensable to the maintenance of life, it is obvious that the health of the body must depend materially upon the quantity and quality of both supplied. Next in importance to the two essential supports of life, food and air, as a means of maintaining health and vigor, is exercise; but reference is here made not alone to locomotion, but to all the functions which minister to human existence.

Now, if it comported with our plan to pursue the subject of physical education in detail, we should divide the period of life to which it more especially applies, into the consecutive stages of Infancy, Childhood, Adolescence, and Puberty; and in connection with each stage, we should consider in successive order the question of food, air, clothing, cleanliness, exercise, and moral management.

As an example of the improvement in the management of infants in modern times, it is sufficient to refer to the entire abolishment of the use of the swaddling-band, as was for ages the universal practice, by which the limbs and head of the infant were deprived of all free motion. As, in the young throughout the animal kingdom, there is an instinctive impulse to almost constant exercise, it may with reason be concluded that the free use of its motive powers gives a pleasurable sensation to the infant, while their restriction is productive of pain. The extinguishment of this prejudice was certainly a great improvement, both physical and moral. As the restraints imposed on the infant's free motions will often excite an irritable temper, and as especially those powers which tend to excess, acquire force by exercise, the moral laws, even at this early period of life, are not to be disregarded. It is in infancy particularly that angry passions ought not to be aroused; for, then, those other moral feelings and intellectual powers, by which these passions are controlled in later life, are not yet sufficiently developed.

Minute details of the management of infants would of course be here out of place; but in regard to the infant's earliest sustenance, we cannot forego a remark. So plainly designated by nature for this purpose is the mother's breast, that the question admits of no dispute. For this exercise of maternal function, every consideration, both moral and physical, pleads; for, while the purest emotions of the heart are excited in both mother and child, the health also of both is thus mutually promoted. When young and healthy, it is the mother's bounden duty, as it ought to be her dearest delight, to nourish the being which she has brought into existence, with the food expressly provided by nature. But the capability of performing this duty is unfortunately not possessed by all mothers; and if it cannot be done with safety to the mother and advantage to the infant, a substitute ought to be obtained. Reference is here made to this point, more especially to advert to the fact that a considerable portion of the mothers of the better classes of society, thus incapacitated, have become so through errors of physical education, and the debilitating effects resulting from luxury, fashion, and dissipation; and such a mother would be most apt to perpetuate the error in her child, if a female.

As regards childhood and adolescence, our remarks will be limited to exercise in the open air. As the young throughout the animal kingdom are instinctively prompted to exert freely and actively their muscular energies, so, in the infancy of man, in conformity to this intimation of nature, should those harmless gambols which exercise the limbs, be encouraged, without reference to the constant guidance of a nurse. No child should be debarred from exercise and the free use of pure air, as upon these, in a great measure, the health, vigor, and cheerfulness of youth depend. In the physical education of boys, error in this respect is but of occasional occurrence ; but is very often the fate of female adolescence. How often does it happen that, in the over-anxiety of a mother for delicacy of complexion in a daughter, or in the apprehension that her manners may become vulgar, and her limbs coarse and ungraceful, she is so prevented from the enjoyment either of fresh air or exercise, that she acquires a feeble, sickly, and languid habit, which may, throughout the whole course of her life, render her helpless and capricious, and perhaps the subject of much suffering !

When, from a false idea of improving the shape or giving grace to the carriage, attempts are made in early youth to constrain the natural movements, by confining children for too long a period to any particular position, they become, as is well known to physicians, restless and uneasy, while their muscles acquire tricks of involuntary motion. Much of this is witnessed as the result of the mode of physical education still too much in vogue in schools ; such as, precise methods of walking, and positions according to rule in sitting and during recumbency and even in reference to the sleeping posture. Now all these restraints upon nature, which require that the muscles must act in order to become developed, and must rest when they become fatigued, tend directly to the production of a shuffling gait, bandy legs, and a crooked back. To exercise all the muscles of the back, for instance, a child must run, jump, and roll over ; but if all these forces are kept unexercised, they become weakened, and soon the balance of power is destroyed. Thus when a child is compelled to sit for hours on a bench without a back, many of the muscles of the spine become fatigued to such a degree, that they do not recover themselves ; and as they are consequently overcome by their antagonizing muscles, a curve in the spinal column is produced. In a country school-room, where boys and girls are not taught how to sit, we find them on their benches without backs, all coiled up like hoops, the spinal muscles having taken a position most favorable for resting. Now if one of these boys or girls is told to rise, he or she stands up with a straight back and an erect head, this being done by no action which had been taught, but by the simple effort of *rested* muscles. In the spines of these children, deformities are almost unknown, while the boarding-school miss, who sits and walks according to rule, scarcely fails, in a greater or less degree, to become the victim.

Hence it follows that the corporeal exercise of the two sexes should not be unlike. Girls should not, as is too generally the case, be confined within the precincts of the nursery, or, if permitted the enjoyment of a short walk, be veiled and protected from every gleam of sunshine and every playful zephyr. Not less important to their health and well-being than to that of their brothers, is the unrestrained enjoyment of their limbs in the open air, with no ever-watchful eye to curb the lively joy of their unclouded spirits. As well might we attempt to improve the beauty and vigor of our forest trees, by transplanting the sapling to the green-house and there extending its tender branches along an artificial frame-work, as to hope, by means of belts, splints, ligatures, and confinement, in conjunction with the teachings of the posture-master, to bestow upon the limbs of a child graceful form and motions, cheerfulness to its spirits, and vigorous health to its constitution.

In girls, after childhood, education is formally commenced, with all the zeal and earnestness that maternal solicitude can inspire ; but every step is one of error, since all the free motions of the body and limbs are restrained. The young lady is now taught to keep her head erect and her shoulders drawn back, and to practise, at the same time, a certain demureness of look ; and as muscular contractions, as just explained, require intervals of relaxation, and as to maintain long the head and shoulders in the position approved by the dancing-master, requires an effort beyond the powers of nature, it follows that, instead of strengthening the muscular powers, they actually become so enfeebled that deformity soon supervenes. If mechanical aid, in the way of a laced waistcoat, is now resorted to, the consequences are still worse ; for a muscle thus consigned to inactivity, soon wastes away and loses its power.

Reference has already been made to the derangements of the system caused by constriction of the chest, the effect of which is, that in proportion as the breathing is interrupted, is the blood imperfectly vitalized ; and as the nutrition of the whole body is immediately dependent on the blood, in the same ratio will all the organs of the body be diminished in energy. As the muscles of the back gradually become weaker from the continued pressure, until finally they are unable to sustain the incumbent weight, the various deformities of the spinal column speedily ensue.

But there are numerous other derangements which are consequent on tight-lacing, some of which have been already noticed. As the volume of air of each inspiration becomes diminished, this deficiency is compensated by increased frequency ; and there is thus produced, by the disturbance of quickened respiration, not only a tendency to inflammatory action in the lungs, but the heart too becomes excited, with acceleration of the pulse, and finally even palpitation may supervene. As these evils may result from simple constriction of the chest, it follows that, at a more advanced stage, when derangements of the stomach, liver, menstrual function, the spine, in a word, all the organs of the thorax and abdomen, have added new sources of irritation, the complicated evils may become fearfully aggravated.

These errors of bodily constraint committed in female education, cannot be mentioned too often. They are thus adverted to by Dr. Alexander Rilgour : " Meditate on this, ye mothers, whose poor girls can scarcely walk, much less run and romp ; and who procure for them crooked backs and pale cheeks. Meditate on it, ye parents who send your daughters to fashionable boarding-schools, in order that, in acquiring art, they may lose nature ; and ye who are looking out for wives, say, will you take this deceptive creature, with her pale cheeks and fetid breath, and distorted body—the victim of her mother and fashion—or her who comes bounding down the hill-side to your arms, with her ringlets streaming in the wind, her face with the freshness and glow of health, her body in the luxuriance and freedom of unchecked and uncontrolled nature, and her kiss sweeter than

' Sabean odors from the spicy shore
Of Araby the blest ?' "

Moreover, the predisposition to consumption, caused by the conformation of the chest artificially produced by tight lacing, is further promoted by the inadequacy of the clothing even among women in the highest orders of society. "Too much confined within doors," says Professor Chapman, "by their domestic duties, they scarcely ever venture out adequately clothed, and particularly when they exchange the ordinary for the flimsy attire in which they are equipped on occasions of public exhibition. Then it is that the warm investments of the morning are substituted by the light gossamer draperies of the evening. With the neck and arms half denuded, and the feet scarcely more protected, do they rush at some late hour of the night from heated rooms, worn down and exhausted, to plunge into the external air, often cold, damp, and chilly, in a state of the greatest susceptibility to the aggressions of pulmonary affections."

Thus do ladies, as it has been well remarked, in obedience to the tyrannical laws of fashion, "*defy physical laws, breathe freely in armor, and are warm in gossamer.*" But women should be early taught that health and beauty are inseparable—that beauty cannot exist independent of healthful action; for unless the whole frame is preserved in health, it is idle to expect an augmentation of grace and symmetry in form, or increased brilliancy of complexion. These are but the outward signs expressive of the harmonious performance of the internal functions—the result of a mode of living which is conformable to the laws of hygiène.

But in vain will medical men demonstrate the truth of their precepts, advise, and warn: the *beau sexe* will not the less continue to brace in the chest and shoulders, until they become positively deformed. Instead of being allowed to attain its just proportions, uninfluenced by the interference of art, the body is gradually forced to assume forms, however unnatural, that the caprice of the day may chance to admire. There is just as much barbarism in this practice as in the pinching of the feet by the Chinese, or in the custom, still prevailing among a certain tribe in Oregon, of flattening their heads. "How a spider-waist," says a French medical writer, "should ever be regarded as a sign of beauty, puzzles us poor men mortals to understand." There is, after all, but one way of convincing the ladies of the danger and absurdity of this practice, which is to show that it really causes deformity, and thus diminishes to the same extent their attractions.

It hence appears from the preceding researches, that the object of hygiology is to place man in such a physical and moral condition, as will best advance his individual and social development; and to arrive at this result, it is necessary to determine the influence upon mankind of all surrounding circumstances, physical, moral, and intellectual, by which our organization is so remarkably modified; such as, for example, the agency exercised upon man, during the historical period, by the various governments, laws and creeds—by occupations, modes of life, and moral agencies—and by all the physical circumstances included under the general term of climate.

To investigate these various subjects in detail would require volumes. Under the head of climate, for instance, it would be requisite to treat of its meteorology and vital statistics. The former would comprise an inquiry into the mean annual temperatures and the distribution of heat among the seasons, the prevailing winds, the hygrometic condition and purity of the atmosphere, in proportion to the influence of local causes, as well as intensity of light, magnetism, and electricity. The latter would develop the special agency of these climates, thus variously modified, upon man, as regards mortality, the formation of particular customs and habits, and their influence on his moral, intellectual, and physical nature.

These general laws might be conveniently illustrated by adopting a classification, consisting, first, of all atmospheric agencies, embraced under the term meteorology, which would include endemics and epidemics; secondly, all animal and vegetable aliments, both solid and liquid; thirdly, the corporeal actions or functions under the influence of the will, which would embrace the subject of physical education, the various labors of the field and the workshop, and consequently the diseases peculiar to particular artisans; and fourthly, the nervous system, as relates to intellectual exertion, the passions, etc., would constitute another distinct head.

These several subjects will be more or less illustrated during the progress of this treatise; but, as regards the United States, the investigation will be of a more special kind. Enough, however, has been already said, to show that the object of hygiène is a great and a good one; and that, as its aim is human happiness, it is essentially noble and godlike.

In illustration of the influence of climate upon the mean duration of human life, the following table is adduced by Dr. Motard, in his "*Essai a Hygiène Générale*," as the mean annual mortality in different degrees of latitude:

Within the tropics	1 death	in	25	inhabitants.
From 20° to 40°	1	"	34·5	"
" 40° to 60°	1	"	43·2	"
" 60° to 70°	1	"	50·	"

In Iceland, it has been computed, from seven years' observations ending with 1831, that there is one death to 30 inhabitants.

That extremes of great and prolonged heat in inter-tropical regions, and of cold in hyperborean, are adverse to general longevity, is sufficiently obvious; but, farther than as a general law, we put no confidence in the above table. Although extreme continuous cold enfeebles the functions of the animal frame, and thus stunts its development, yet the climates of Russia and Norway have at least the reputation of giving to their inhabitants a high longevity. It is, in fact, an admitted truth, that the most variable climates are best adapted for the development of the various mental and bodily powers. On the other hand, it is equally true, that in equatorial regions, premature old age and decay are induced as a consequence of the excitement and waste to which the powers of life are unceasingly exposed; but at the same time, we are not without the most satisfactory evidence that temperance and abstemiousness, as was illustrated in the early ages of the Church, by the history of those who sought a refuge from persecution in the sandy deserts of Africa, will secure, even there, a long life to their votaries.

That the above table, however, farther than as the most general law, is entitled to but little respect, will appear when the influence of local causes shall come under consideration; as, for instance, the fact that one class of a city has a mean duration of life three times greater than another, or that the probability of life at birth, as in Geneva, has doubled five times in the course of three centuries. Besides, it will be shown, in treating of the climate of the United States, that the laws of temperature on the same parallels become so modified by the influence of physical geography, that a classification of *medical* geography having for its basis mere latitude, is wholly inadmissible.

The second head referred to above, viz., the *ingesta*, which comprises the nourishment introduced into the stomach, exercises, it will be seen in the sequel, so far as the production and supply of food is concerned, a controlling importance upon the increase and decrease of population; and, as experience also teaches us that years of scarcity and famine are, in many countries, years of pestilence, this branch of the subject acquires additional gravity. This theme has been extensively investigated by Dr. Melier, as will be seen in Chap. II.; and it has been also happily treated by Dr. John Ball, in his volume on "Regimen and Longevity," in which enlarged views of national dietetic usages and of the wide geographical range and cultivation of various vegetable substances for food, are furnished.

Upon the influence of arts, trades, and literary professions, of civic states and habits of living, upon the duration of human life, much has been written. As applicable to England, Shackrah's treatise has a high reputation: but it is unfortunately singularly deficient in statistical results. Lombard's work, on the contrary, possesses this merit in a high degree, as it is based on the statistical data furnished by the city of Geneva, from 1796 to 1830. Before bringing, however, this subject before the reader, it would seem best to lay before him some general historical views relative to hygiène.

SECTION II. *State Medicine viewed in its Historical Relations.*

It is a lamentable fact, that, in modern times, public hygèine has not received that share of attention from governments, either national or municipal, which it so richly deserves, not only on the ground of humanity and Christian benevolence, but on that of state policy. Looking at the remains of the numerous aqueducts of ancient Rome, of her stupendous edifices for bathing, and of her *cloacre* or sewers, in all which, by the way, she was rivalled in the ancient cities of Mexican and Peruvian civilization, the inferiority of modern cities generally, and of the "eternal city" herself, as she now is, cannot but make us feel the blush of shame. Among the ancients, the public salubrity was considered a matter of so much importance, that those wonders of antiquity, the Roman drains, were under the protection of tutelar deities—the goddesses Cloacina and Mephitina, and the god Sterquilinus; and at Rome, among the superintendents of essential structures, we find the names of Cicero and Agrippa; and among the Greeks, that of Epaminondas. Among the Assyrians, Medes, and Persians also, there were baths of great grandeur—so much so among the last named, that even Alexander, notwithstanding accustomed to the voluptuous ones of Greece and Macedon, was astonished at the luxury and magnificence of those of Darius.

Even the Bible, at a period as remote as the days of Moses, abounds in minute hygiènic enactments; and in the Koran also, prompted doubtless by the example of the Jewish lawgiver, various hygiènic observances were required. Many of these, however, such as the interdiction of the eating of swine, and the drinking of wine, were strictly in accordance with the climatic laws of that region. Nor did the Greek and Roman legislators fail to enact laws for the preservation of the public health. In Sparta, the education of the children was made an exclusive affair of the state; and here originated the gymnasia, which became general in all the Grecian States. While the youth were thus trained to the endurance of the fatigues and perils of war, they were, at the same time, at least in Athens, instructed in ethics and philosophy by the teachings of Aristotle, Plato, and others. At Rome, the combatants in wrestling and racing, in throwing the javelin and pitching the quoit, would, while yet warm and panting, plunge into the Tiber—a circumstance thus alluded to by the poet of the "Seasons;"

> Hence the limbs
> Knit into force; and the same Roman arm
> That rose victorious o'er the conquered earth,
> First learned, while tender, to subdue the wave.

All these facts are most intimately connected with the laws of vital statistics. In proportion as public and private industry are sustained by equal and beneficent laws, thus securing the greatest good of the greatest number, will the mean duration of human life be extended, provided that man does not, at the same time, infringe upon the equally immutable moral laws.

Many examples might be adduced of countries, once well-governed, and consequently prosperous and healthy, which, by a change of rulers, became a scene of desolation and of pestilence. A case in point is afforded by the altered aspect of Palestine, which, instead of having as formerly a crowded population dwelling in a "land flowing with milk and honey," is now almost a desert, possessed by the roaming and lawless Arabs. The same fate, with the loss of their liberty, has awaited Greece and Italy. As these cities fell into decay, in the same ratio as poverty took the place of wealth, was vigorous health supplanted by disease, and thus also was the usual population diminished. Thus has the face of Italy, and in a corresponding degree its climate, as regards salubrity, been changed at three or four distinct periods. By the incursions of barbarian conquerors, her cities and villas have been more than once sacked and burned, these despoilers laying waste, at the same time, her fields and vineyards; and to these causes of diminution of population were soon added famine and pestilence. The most highly cultivated districts of ancient Italy, as, for instance, Latium, with her hundred cities, now present a dismal aspect of desolation. How melancholy are these changes! The very temples and groves dedicated to Hygièa and Æsculapius, are now the chosen seats of malaria!

Similar examples of desolation resulting from the same causes in other countries, might be readily adduced. In the history of Holland, we have a noble instance of how a people, sustained by free institutions, have been enabled not only to triumph over the most discouraging circumstances of physical geography, but even to convert these very circumstances into so many sources of wealth. Were these stimulants to industry, however, taken away by the oppression, for instance, of domestic tyrants, we should soon have, in proportion as her dikes fall to decay, another example of desolation breathing pestilence, and as a consequence, depopulation. Such is the present condition of the island of Minorca under Spanish rule, compared with its state a century ago, when it was a British province.*

It is thus seen that history clearly establishes an inseparable connection between health and general longevity on the one hand, and social order and good government on the other. The true sign of a real and permanent increase of population is, says Baron Humboldt, the increase of the means of subsistence; and hence, we cannot but admit that an important truth is represented by the metaphorical expression of a political economist, "*Wherever there's a loaf added, there's a man born.*"

A comparison of the vital statistics of the past and present century is highly favorable to a system of public hygiène. In London and Paris, mortality has diminished in a ratio with the protection extended to the public health by hygiènic measures; and here, too, epidemics are fatal in proportion as the population is crowded and poor. In Paris, in the official report on the Cholera, it is shown, that in the city, compared with the quarter of the Tuilleries, the number of cases in the former was thirty times greater than in the latter, while the deaths were twenty times more numerous.

With the advance of Christianity and civilization, the mean duration of life has been extended; a deduction which is the result of numerical calculations, in the same cities and countries, at different and remote periods. In consequence of greater security in person and property, more certain returns in the various industrial pursuits, better and more abundant food, and other causes of a kindred nature, the civilized countries of the present day give a higher average of the duration of human life, than perhaps at any other period of the world's history. It is, of course, not to be understood that any reference is here made to the days of Methuselah. In Geneva, since 1560, we have conclusive statistical evidence that the probability of life at birth has gradually become five times greater. In Paris, as just remarked, there has been a diminution of mortality just in proportion as the public health has been protected by hygiènic measures; and hence, if we go back as far as 1350, we find a mortality as high as 1 in 17; in 1660, it was 1 in 25; and from that period it has gradually grown more favorable, having been, in 1821, 1 in 32; and in 1826, 1 in 36. The proportionate number of deaths in London, at the commencement of the last century, so far as the estimated numbers of a people may be relied upon in the absence of a census, was as much as 1 in 20. At the period of the first census, (1801), the ratio within the bills of mortality had fallen to 1 in 39; and at the present time it is calculated to be 1 in 40. Hence it is obvious, that a very great amelioration in mortality has occurred within a century; but the assertion made by all writers on this subject, that the value of human life in London, because the ratio of deaths has been diminished one half in a century, has doubled within the same period, is a very gross error. Instead of a duplication of the mean duration of human life within a century, the increase has been only from 25 years and 1 month to 29 years and 10 months. The nature of this error will be shown more fully in the sequel; suffice it here to say, that it has arisen from regarding the proportion of deaths as exponents of the average ages of deaths.

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* Vide "New York Journal of Medicine" for July, 1843. *Article* "The Endemic Influence of Evil Government, illustrated in a view of the Climate, Topography, and Diseases of the Island of Minorca. By J. M. Foltz, A. M., M. D., Surgeon U. S. Navy."

From the registers of population, age, sex, disease and death, said to have been kept at Rome for the period of 1000 years, it has been inferred, that the probable duration of life among the better classes was only about thirty years; and hence, as the mean duration of life among the same class in Great Britain is at least fifty years, (the mean of the whole population being forty-five), these would have an advantage over the Romans, at the period of several centuries before Christ, of not less than fifteen years.

This deduction, which is considered by most writers as a strong point, must, however, be received with many grains of allowance; for, to us, the opinion that the extreme period of life has been the same, under the existing physical conditions of the globe, subject, of course, to be modified by surrounding circumstances, seems scarcely to admit of a doubt. At all periods of man's existence, favorable circumstances would necessarily be attended by greater general longevity, whether as regards the mass or a particular class of the community. It is no way probable that there has been a gradual and uniform prolongation of the period of human life; for we find that the three-score-and-ten years of the Hebrew, as the allotted term of a ripe old age, is still the law of the present day.

By John Finlaison, Esq., Actuary of the National Debt, in his official report to the Lords of the Treasury, in 1829, and which was printed by the order of the House of Commons, the same opinion is advanced. "The boundary," he says, "seems to have remained impassable since the days of Eli, the Priest," (a period undoubtedly 3,000 years ago,) who "was ninety and eight years old, and his eyes were dim that he could not see; and he died, for he was an old man and heavy, and he had judged Israel forty years." Neither does it appear that the ordinary events of forming connections in marriage and rearing families at the usual periods of life, have at all varied within the same length of time. It was the practice in the days of Herodotus to reckon three generations as equivalent to a century, and very accurately. This allows thirty-three years and four months for the increment of time between the birth of a father and the birth of *that son who succeeded him* in the government of the State or family. Whoever chooses to reckon over the same events in regard to the Stuarts, Kings of Scotland, will find the same period true to the day!

Mr. Finlaison quotes the following estimated values of annuities by Vulpian, in the time of the Emperor Justinian, A. D. 529. (Pandect, lib. 35, tit. 2.,) from which very diverse conclusions have been drawn by different writers:

Age.	*Years' Purchase.*	*Age.*	*Years' Purchase.*
Under 20	30	At 44	15
20 to 25	28	" 45	14
25 to 30	25	" 46	13
30 to 35	22	" 47	12
35 to 40	20	" 48	11
At 41	18	" 49	10
" 42	17	50 to 55	9
" 43	16	55 to 60	7
		Above 60	5

"It is uncertain," says Mr. F., "whether in this computation he made any allowance for discount, or something equivalent in meaning; or whether, as is much more probable, this was his notion of the number of years which a life at each age was likely to live. If the latter be the meaning, the Romans must have had but a miserable chance of life in old age.*

We are enabled to add, however, that among the Greeks and Romans, history gives many examples of great longevity; but mere isolated cases of longevity, as will be seen in the sequel, have no direct relation with the mean duration of life, inasmuch as instances of extreme longevity are as frequently found, indeed more so, in the most unhealthy localities, and in the period of man's history when population was in its worst state, as in the most salubrious districts, and at periods characterized by the greatest extension of the mean duration of human existence. What we here refer to is general longevity. By Pliny, the younger, it is stated, that in the year A. D. 76, in the reign of Vespasian, memorable as being a year of taxing, there were found, in that part of Italy lying between the Appenines and the Po, 124 persons at 100 years and upwards. Thus:

54	At	100	Years,
57	"	110	"
2	"	125	"
4	"	130	"
4	"	135 or 137	years,
3	"	140	"

Independent of these, Parma contained five, of whom three were 120, and two, 130; Placentia had one aged 131; Faventia, one at 132; and Rimino, one of 150. But these facts, as Pliny gives no account of the population or of the deaths, stand so isolated as not to be available for any useful purposes. Besides, the extraordinary fact will be made to appear, that an unusual number of centenarians is no indication of the vitality of the masses, that is, of national health or general longevity.

It is a curious fact, that Lucian devoted a treatise to the subject of the enumeration of distinguished individuals of antiquity who attained the age of 80—100 years. Among these a few may be here noticed: and first of kings and generals: Mithridates, warring against Rome to his last hour, died at 84 ; Numa and Servius Tullius, both died at 80 ; Tarquin the Proud, in his exile, at 90 ; Hiero, of Sicily, at 92 ; Ptolemy Lagus, in Egypt, at 81 ; Lysimachus fell in battle at 85 ; Artaxerxes Mnemon, of Persia, at 86 ; Artabazus, made king at 86 ; Attalus died at 82, etc.

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* To give the reader an opportunity of exercising his own judgment in the decision of this question, it may be well to give here the original document of Judge Ulpianus, as recorded by Justinian: "Computationi in alimentis," &c.—Southwood Smith, vol. 1, p. 132.

Among the Greek philosophers, noticed by Lucian, who were at the head of their respective schools, are the following : Cleanthes, aged 99 ; Zeno, 98 ; Nestor, tutor to Tiberius, 92 ; Zenophanes, 91 ; Diogenes, the stoic, 88 ; Cameades, 85 ; Zenocrates, 84 ; Posidonius, 84 ; Critolaus, 82 ; Athenodorus, 82 ; Plato, 81 ; and Chrysippus, 81.

Among the historians, poets and other writers, we find the following : Isocrates, who wrote the celebrated panegyric at 96, killed himself at 100, on learning the defeat of his Athenian countrymen at Cheronea ; Cratinus, Philemon, and Epicharmis, all three comic writers, died each at 97 ; Zimæus, at 96 ; Sophocles was choked at 95 ; Hypsicrates died at 92 ; Xenophon and Aristobulus, at 90 ; Anacreon and Stesichorus, both at 85 ; and Apollodorus and Eratosthenes, at 82.

As the real meaning of Judge Ulpianus's document has never been satisfactorily explained, we are left to exercise conjecture. It may be assumed, with good reason, that it includes only the higher classes of the resident male citizens of Rome ; and, as regards the lower classes, or the inhabitants of the Roman provinces, we cannot even form a rational supposition. Compared with civilized Rome, the value of life subsequently in barbarian Europe, doubtless fell to a very low point ; and from this minimum, it again gradually arose with the revival of civilization ; and now it may be fairly assumed that the whole mass of European population stands on an equality with the select class in ancient Rome. In some favored localities of the present day, however, this improvement of man's condition far exceeds, no doubt, even that of the first class of Roman citizens.

Section III.—*The Sanitary Condition of the different Classes of the Population, in Town and Country.*

We are now prepared for the consideration of this highly important inquiry, which has, in modern times, engaged the attention of Germany, France, England, and other European countries, and which is still prosecuted with undiminished zeal. Our object now is to illustrate the remark made in the early part of this chapter, that thousands annually perish in England and Wales, from a neglect of those conditions which Divine Wisdom has appointed as positively essential to the well-being of man ; and equally obvious is it, that in all other countries do similar effects follow like violation of hygiènic laws. This highly important subject admits of an extended exposition ; and in pursuing the investigation, the five Annual Reports of the Registrar-General of England, and the Report on the Sanitary Condition of her Laboring Population, with its Supplement, on Interments in Towns, will be chiefly brought in requisition. The titles of these several works have been already cited.

But a faint conception of the evils under which the laboring classes of Europe suffer, can be afforded by partial descriptions of their condition. Of those defects which are most important, and which come most directly within practical legislative control, are, the neglect of drainage, and the removal of the noxious refuse of houses, streets and roads. As regards the sanitary effect of town and land drainage, and public supplies of water, no evidence need be here adduced, as all the world, and every age of man's history, testify to their advantages. Another class of causes consists in the internal economy and bad ventilation of places of work and workmen's dwellings, in connection with the domestic habits affecting their health. There are also in their private dwellings, an over-crowding and a want of separate apartments, which exert a most unhappy influence upon the morals of this class of the population.

Than the moral and physical evils, as well as the management of the poor in great cities, there is no subject that lies more peculiarly within the scope of public hygiene. That the fatality of epidemics is in proportion as the population is poor and crowded, is proved on every hand. Indeed, no branch of medical inquiry is more interesting than the history of epidemics—a great question, which, as has been truly remarked by Sydenham, has never been treated "in proportion to the dignity of the subject." The history of London shows, that in the same ratio as filth, want and misery, are removed, do epidemics lose their chief power. From 1592 to 1666, a period during which this city was remarkable for its impure state, the average mortality from the plagues, which appeared at intervals of ten or twelve years, was equal each time to a fourth part of the whole population. Since the latter period, the severest plague that has visited London was epidemic cholera, by which, in consequence of the modern improvements of the city, only one person died out of 250 inhabitants. These interesting statistic views, in which the influence of the progress of civilization is evinced in a gradual diminution of mortality, have been already adverted to: and they will be still further illustrated in the sequel. Among the causes of this increased salubrity, may be enumerated, the improved condition of the lower classes of society, in most countries, as regards food, clothing and fuel—better habits, as respects cleanliness, ventilation, and the use of spirituous liquors—and improved medical practice, more especially in reference to the introduction of prophylactic means, as for example, vaccination. In these circumstances may be found the exemption of Great Britain, for nearly two centuries, from those desolating epidemics just referred to: and, as there has been no recurrence of the plague in London since 1665, which was the year preceding the great conflagration which destroyed those narrow streets in which it was practicable to shake hands from the attic windows of opposite sides, we may trace the cause, in great part, in the improved system of medical police that followed.

All statistical inquiries show that evils of the most fearful description must inevitably result in urban populations, if the means of ameliorating their condition are wholly neglected. One-tenth of the entire population of London are paupers, and every morning 20,000 persons rise without knowing where they are to sleep the next night. In Dublin it is known that, in one year, 60,000 persons passed through the fever hospital. In Paris, to cap the climax, one-sixth of the whole population die in the hospitals, while every third child born is illegitimate!

Art. II.—*On the effects of Bloodletting on the Young Subject.* By John B. Beck, M. D.,* *Professor of Materia Medica and Medical Jurisprudence, in the College of Physicians and Surgeons of New York.*

There is no subject, perhaps, so deeply interesting to the practical physician, as the effects of Bloodletting on the human system, and the various uses to which it may be applied in the management of disease. In promptness and power, it exceeds all other agents, and its capacity for doing good or harm is proportionally great. It is resorted to, also, at every period of life, and by some it is even prescribed with equal, if not more freedom in children than in adults. It becomes then a question of the greatest moment to determine, if possible, whether the age of the patient has any influence in modifying its effects. And this is the subject upon which I propose to make a few remarks.

That the youngest child can sustain the loss of blood within certain limits, as well as the adult, is manifest from a variety of facts. Thus children are sometimes born in a state of asphyxia from apoplexy. On dividing the cord and letting a moderate quantity of blood flow, respiration is established, and every thing does well. Again: not unfrequently, from not applying the ligature sufficiently tight around the cord, or from the cord contracting and thus loosening the ligature, hæmorrhage takes place, and yet no injurious consequences result. Besides this, we know that in cases of disease, the youngest children may be bled, not merely without injury, but with advantage. When, however, the loss of blood is carried beyond these limits, important peculiarities are observed, showing a difference in the effects produced in the young subject, from those in the adult.

The first peculiarity is, that the young subject does not bear the loss of considerable quantities of blood, so well as the adult. I am not aware that children fall into a state of syncope from the loss of blood more readily than adults; but when syncope does come on, it is very certain that they do not recover from it so readily, and they are always in more or less danger. In the adult, syncope from the loss of blood, unless the quantity be very large, is a state which, as a general rule, is attended with little or no danger, and from which the patient speedily recovers. Hence it is that physicians are continually in the habit of inducing it in the management of certain forms of disease, and not merely with impunity, but evident advantage. In the young subject it is not so, and it is a state always attended with hazard. If the child recover from it, it does so very slowly, and every now and then it sinks irretrievably under its influence. That this is a fact, is confirmed by abundant testimony, on the part of those who have taken the trouble to make the necessary observations. Dr. Marshall Hall, in speaking on this subject, says, "In infancy, the state of syncope (from the loss of blood) is a state of danger."† Evanson and Maunsell remark, "As a general rule, it is well to stop the flow of blood when decided pallor takes place, without waiting for actual fainting, from which children do not quickly recover."* Armstrong says, " Do not bleed to actual syncope in children, as they are apt to fall into convulsions, of which they may die. Children do not recruit from very large bleeding like adults."† Dr. Ryan observes, " The abstraction of blood in cases of infants and children until fainting occurs, is the worst practice that can be imagined, as convulsions or death may be produced."‡ Indeed, the general fact admits of no question; and the reason is obvious enough, if we reflect for a moment upon the nature of the agent, and at the same time compare it with the susceptibility of the subject. Carried to the point of syncope, bloodletting is one of the most direct, speedy and profound sedatives that we have in our possession. In a few moments, it reduces the subject from a state of perfect health or the high excitement of disease, to the state of temporary death. Now it is very evident that the capability of recovering from such a state, must be just in proportion to the powers of the constitution. From the very nature of its organization, therefore, it is obvious that the system of the child cannot sustain so well as the adult a shock so sudden and powerful as this.

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* We republish from the Annalist (No. 6, Vol. II.) the following article from the pen of Dr. Beck, in compliance with the request of some of our subscribers, and to complete a series commenced, and thus far continued, in this Journal. We trust the health of the writer will soon be re-established. and that the profession may long enjoy the benefits of his rare learning and sound practical skill.—Ed.

† Researches on the Morbid and Curative Effects of the Loss of Blood, by M. Hall, M. D., p. 87.

The second peculiarity attending the loss of blood in the young subject, is, that the nervous system is more powerfully affected than in the adult. The evidence of this is, that convulsions and coma more frequently occur after the loss of blood in children, than in adults. In the adult, both these occurrences sometimes take place, more especially convulsions. Thus, for example, puerperal hæmorrhage is not unfrequently followed by them. I have witnessed the same thing in a gentleman of irritable habit, who had been bled too largely from the arm. He had lost about a quart of blood, when incipient syncope came on, followed immediately by a violent convulsion. In children, however, these occurrences are much more common; and the reason, no doubt, is the greater predominance, as well as impressibility of the nervous system. A great variety of causes, we know, will induce convulsions in a child, and among these, exhaustion is a very common one. With regard to coma, too, this may be brought on in children by any debilitating cause. A striking illustration of this we see now and then in diarrhœa, which has been continued too long. In these cases, the brain becomes suddenly affected, and a state of stupor or coma is induced, which not unfrequently is mistaken for Hydrocephalus. The same thing occurs from the loss of too much blood.

The third peculiarity is, that the repetition of bloodletting is not so well borne by the child as the adult. A child of good constitution and ordinary strength, may bear a first bleeding, perhaps quite as well as an adult. Under particular circumstances, too, of disease, a second may be borne very well. Beyond this, as a general rule, it will be found, I think, that the child cannot well sustain the loss of blood. On this point, I believe, there is little or no difference of opinion among men of judgment and observation. Dr. John Clarke says, " Very young children bear very well the loss of blood even to fainting, once, or twice, but they ill bear a more frequent repetition of bleeding. Their powers sink under it, and by no art can it be replaced."* Marshall Hall says, "In infancy, a second or a third bloodletting is borne with difficulty."† Evanson and Maunsell say, "Repetitions of bloodletting are not well borne by the child."‡

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* On the Management of Diseases of Children, p. 107.

† Lectures, &c., by John Armstrong, M. D., p. 387.

‡ Manual of Midwifery, by M. Ryan, M. D., p. 475.

The fourth peculiarity is, that the effects of local bloodletting, especially leeching, are different upon the child, from what they are upon the adult. In the adult, the effect of leeching is in a great measure local, and it is not usually resorted to until after general bloodletting is considered inadmissible. In a child, on the contrary, it produces very much the same effect as a general bleeding. From the greater vascularity of the skin, too, the amount of blood lost by a leech, applied to a young subject, is much greater than in the adult, and it is frequently much more difficult to arrest the hæmorrhage from it. The general effect, then, of leeching, on the young subject, is much greater than upon the adult. Hence it is that cases are so frequently occurring, in which children die from leeching. Of this we have numerous cases on record. Dr. Christison says, "I have twice known children bleed to death in hospital practice, the nurse having labored under a common prejudice among their craft, that leech-bites cannot bleed too much."§ Pereira states, that "in two cases of infants, I have seen exhaustion with insufficient reaction, consequent on hæmorrhage after a leech-bite, terminate fatally."‖ Ryan says, "The loss of blood from a single leech-bite has caused the death of a child."¶

From the foregoing, then, it would seem, that although a child may bear the loss of certain quantities of blood, perhaps quite as well as the adult, when carried beyond this, they do not bear it so well, nor do they bear the repeated and continued loss of blood so well; and under these circumstances, dangerous and even fatal consequences are apt to ensue. In other words, bloodletting is an agent which operates with more power, and is attended with more danger in the child than in the adult.

If all this be so, then some conclusions may be drawn with regard to the practical application of this agent, which, to the young practitioner at least, may be of some importance.

1. Great caution should be exercised in bleeding children to the point of syncope. If the state of syncope be attended with the danger already alluded to, it is very certain that nothing can justify us in producing it, unless it be determined that it is essential to the management and cure of the case. Now, that in most cases, even of decided inflammation, it is not necessary to carry bloodletting to this extent, is very certain. We know that it is not so in the adult, and it evidently cannot be so in the child. As a general rule, therefore, it cannot be required. By some high authorities, however, it is supposed that under certain conditions of diseased action, the safety of the patient depends upon the production of syncope. Thus, for example, in croup, bleeding ad deliquium has been insisted upon by the late Dr. Bayley of New York,** Dr. Dick of Alexandria,†† and Dr. Ferriar of Manchester. The

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* Commentaries on the Diseases of Children, p. 103.

† Researches on the Loss of Blood, p. 87.

‡ On the Diseases of Children, p. 108. § Dispensatory, p. 492.

‖ Materia Medica, Vol. 2., p. 769. ¶ Manual of Midwifery, p. 475.

** New York Medical Repository, vol. 12, p. 331.

†† Barton's Med. and Phys. Jour.

latter especially speaks of it, as "the essential point of the cure, without which no relief can be effected."* If in any disease the practice be justifiable, it certainly is in this; and it cannot be denied, that in a great number of instances it has been resorted to with safety. Notwithstanding this, general experience has abundantly established the fact, that even here it is not necessary, and that all the beneficially sedative effects of the remedy may be obtained, without going to this extent. On this point there appears to be, at the present time, a pretty general concurrence of opinion among enlightened practitioners; and the rule of practice ought to be, *never* in any case to bleed to syncope, but to stop as soon as paleness of the lips and cheeks comes on. In this way all the good of bloodletting is secured, while the risks of syncope are avoided.

2. To determine the precise amount of blood proper to be drawn, is a matter of much greater nicety, and involves more serious consequences in the child than in the adult. In the adult, the loss of a little more blood than is necessary, as a general rule, is a matter of no very great consequence. In the child, on the contrary, it may prove fatal. In the adult, too, we have means of judging how far it ought to be carried which we have not in the child. Thus, for example, the pulse, which in the adult is so valuable a guide in these cases, cannot be depended upon at all in the child. It is always, therefore, a very nice and difficult problem in practical medicine, how to adjust properly in a child the amount of blood necessary to be drawn, to the exact wants of the case. Now there are only two ways in which this can be done. The first is, by fixing upon a certain amount as suitable to different ages. The second is, to judge by the actual effects produced at the time of taking the blood. With regard to the first of these modes, it is evident that it must be a very unsatisfactory guide, if we recollect that no two constitutions are precisely alike, and that there is every difference in the capacity of different systems, even in the same disease, to bear the loss of blood. Then, again, the same disease exists in different degrees of violence, and of course requires a modification in the amount of depletion. Besides all this, different diseases do not require and cannot tolerate the same loss of blood. A general standard, then, founded upon the age of the patient, is really good for nothing, except as a mere approximation. In individual cases, it must be inapplicable. Hence it is, that all those standards laid down by authors differ so much from one another, and must necessarily do so. If blood be taken by *leeches*, the difficulty is still further increased, from the circumstance that the desired quantity can hardly ever be obtained with any degree of precision: if it is so, it is purely by accident. That this must be so is evident, if we recollect the variable quantities of blood drawn by the leeches themselves, and more especially the greater differences in the after-bleedings. It is not yet settled, I believe, exactly how much blood a leech will draw. Christison says, "Twice as much blood may be usually drawn by fomentations, as by the suction of the leech. A single leech, when applied successfully, may thus be held to draw, from first to last, *about half an ounce of blood on an average*."* According to Evanson and Maunsell, "the quantity of blood obtained by a good

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* Medical Histories and Reflections, by JOHN FERRIAR, M. D., p. 371, Am. Edition.

† Dispensatory, p. 492.

leech, allowed to bleed for half an hour, may be estimated *at one ounce.*"* Mr. Pereira says, "I believe *four drachms* to be the maximum. On an average I do not think we ought to estimate it at more than *a drachm and a half*;"† i. e., the quantity taken by the leech itself, without reference to the after-bleeding. Now the fact is, it is impossible to specify the amount of blood drawn, either by the leech itself or in consequence of the subsequent bleedings. Leeches differ in their size very greatly, and there must, of course, be a great difference in the quantity of blood they are capable of taking. Then, again, there is every difference in the after-bleedings, depending on the vascularity of the skin, the part of the body to which they are applied, and various other circumstances. From all this, it is evident how unsafe it must be to draw blood from a child, according to any average standard.

With regard to the second mode, that of judging of the extent to which it should be carried by the effects produced at the time: in many cases this answers exceedingly well. In inflammatory complaints, where the full effect of the loss of blood may be necessary, the rule can be satisfactorily applied, and the best plan is to bleed in the erect posture, until pallor of the face comes on, without producing actual syncope. In the adult, according to Marshall Hall, the production of actual syncope constitutes the criterion as to the exact amount which the case requires, as well as of the capacity of the system to bear the loss of blood, and therefore he recommends this as the rule for the due administration of the remedy. Now, that this will not answer, must be obvious to every one. Every practitioner knows that cases are continually occurring, in which actual syncope comes on after the loss of a few ounces of blood, when large quantities are afterwards required to be drawn. In children, of course, the rule cannot be applicable. In them, the loss of so much blood as to bring on only approaching syncope might not only be unnecessary, but be attended with danger. From all this, then, it would appear that we are not in possession of any precise mode of determining how much blood ought in all cases to be taken in children; and this shows the necessity of great caution and the exercise of sound judgment, in the use of the remedy.

3. From the uncertainty in estimating the quantity of blood lost by leeches, and the dangers attending the loss of too much from them in children, too great caution cannot be exercised in their use. From the manner in which leeches are ordered by some physicians, in the diseases of children, one would be led to suppose that no harm could ever result from them. From the ease, too, with which they may be prescribed, and the appearance of energy which it gives to the practitioner, it is to be feared that not unfrequently they are used without being actually necessary; and even when necessary, they are suffered to draw blood without sufficient regard to the quantity which may be lost. Now it should always be recollected, as already stated, that leeches operate differently on the child from what they do on the adult. In the latter, they are in a great measure local in their action, and may be, and generally are, used when general bleeding is contra-indicated. In the child, on the contrary, they act in the same way as general bleeding. Their sedative effects, therefore, upon the constitution of the child, are

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* Practical Treatise on Children, &c., p. 106.

† Materia Medica, vol. 2, p. 769.

much greater; and if suffered to bleed beyond a certain limit, they endanger life. On these accounts, it is more necessary to be cautious in the use of them in children, than in adults. It is not my intention to go into any particulars, in relation to the mode of conducting the process of leeching. There are a few points, however, of a practical character, connected with this subject, which may not be unworthy of notice. 1. When leeches are applied to a child, the patient should always be placed in the erect posture. The same rule, indeed, should be observed, in whatever way blood is drawn. If it be a fact that leeches act like general bloodletting upon the child, the propriety of this rule must be obvious; and it is the more necessary to insist upon it, because it is hardly ever observed. As soon as any paleness of the lips or face appears, the child should be placed in the recumbent posture, and the bleeding arrested. 2. When leeches are applied to a child, the patient should never be left until after the flow of blood is completely stopped. 3. Leeches should never be applied at bed-time, and suffered to bleed during the night. In this way, the patient has, in more cases than one, bled to death. If applied late at night, they should be watched just as in the day-time. 4. As a general rule, leeches should not be applied to soft parts destitute of support from underneath, in consequence of the difficulty of making pressure sufficient to arrest the hæmorrhage. The importance of this was first noticed by Dr. Cheyne, who advises them to be applied in croup, not to the neck itself, but over the clavicle, sternum, or ribs.* 5. Leeches sometimes open into arteries, and dangerous hæmorrhage has ensued from this cause. A case of this kind happened, in which the temporal artery was thus opened, and Sir Astley Cooper was obliged to divide the artery before the hæmorrhage could be arrested.† In all cases, therefore, the progress of the bleeding should be carefully watched.

4. If bloodletting be so profound a sedative to children, it is evident that it is capable of doing a vast deal of harm in cases unsuited to its use, and that it requires a very nice discrimination of the character of the case, before it can be used with safety. This may appear very common-place; but, common-place as it is, it is to be feared that it is not sufficiently borne in mind in actual practice. The presence of inflammation or congestion is generally considered a condition justifying and requiring a resort to bloodletting, and so indeed, as a general rule, it is; but it is not universally. Thus, for example, the inflammation attending scarlatina does not usually require or bear well the loss of blood; and there can be no question that, in this complaint, many a child has been sacrificed by a resort to this remedy. Then, again, symptoms analogous to those produced by inflammation or congestion result from a cause directly the opposite, viz.: irritation or mere exhaustion. Illustrations of this we see frequently in affections of the head in children, convulsions, &c. In these cases, if the cause of the difficulty be mistaken and depletion be resorted to, the result may be fatal. All this shows that, before bloodletting is used in children, the nature of the case should be investigated more nicely even than in the adult.

5. In the use of bloodletting in the young subject, especial regard should be had to their constitutions, as well as their mode of living. No

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* Pathology of the Larynx and Bronchia, by John Cheyne, M. D., p. 57.

† Johnson's Med. Chir. Rev., vol. 9, p. 71.

principle is better understood, or ought to be so, even in adults, than that, in the use of debilitating remedies, due regard should be had to the powers of the system. No practice is safe which does not take into consideration the relative capacity of the system to bear them; otherwise the remedies may be more fatal than the disease for which they are prescribed. Now we know that in the adult there is every difference in this respect. In the management of the same disease, accordingly, in different individuals, a very different course of treatment is necessary, if not in the remedies themselves, at least in the extent to which they are carried. In the young subject this is still more necessary. Children whose constitutions are naturally feeble and vicious, or have been enfeebled by debilitating causes, such as poor diet, confined air, &c., sink very readily under the influence of depressing remedies. In these, bloodletting is badly borne, and should never be resorted to unless absolutely necessary, and then in moderate quantities.

6. Great caution should be exercised in the repetition of bloodletting. After what has been already said in relation to the effects of repeated bloodletting on the young subject, I should not again allude to it, were it not to notice the opinions of an eminent authority. Dr. Rush, in his "Defence of Bloodletting," makes the following statement: "I could mention many more instances in which bloodletting has snatched from the grave children under three or four months old, by being used three to five times in the ordinary course of their acute diseases."* That the children alluded to by Dr. Rush survived this treatment I do not doubt; but that these repeated bleedings were necessary, I can hardly believe. At any rate, a practice like this, if generally adopted, would, in my humble opinion, end in the most disastrous results.

In concluding this paper, I trust it may not be thought that I am opposed to the use of bloodletting in the diseases of children. The physician who discards this agent, understands but poorly his profession or the duty which he owes his patients. The proper use of a remedy, however, is one thing, the abuse of it is another; and I must express the opinion, founded on no small observation, that it is frequently resorted to in children when it is unnecessary—when necessary, it is often carried too far—and that in its general use, there is frequently an absence of precision and care, which in many cases renders it a most dangerous remedy. With regard to the use of bloodletting generally in this country, there can be no doubt that the authority of Dr. Rush has exerted an influence the most deleterious. That it should have done so is not surprising. Living at a time when medicine was yet in its infancy among us, a tthe head of the oldest and most influential of our medical schools and attracting by his enthusiasm and his eloquence a large proportion of the students of the country, his sway for a series of years was unlimited, and his sanguinary precepts and his still more sanguinary practice† were speedily diffused from one end of the country to the other. Although sad experience has long since exposed the fallacy, as well as danger of his doctrines, yet many of the evil consequences of them are still to be met with; and not the least of these, it appears to me, is the opportunity which they have, indirectly at least, afforded for the prevalence of quackery. It is a part of our nature to fly from one extreme to another. When an error is once exposed, we are apt to go immediately to its opposite, inferring that what is the reverse of wrong must necessarily be right; and so it has been in regard to bloodletting. The public having been made acquainted with the evils of the practice of Dr. Rush, a prejudice, if not general, at least very extensive, has been created against the remedy itself; and empirics, always ready to play upon the weaknesses and prejudices of the community, have seized upon it for the mere purposes of traffic. Accordingly, the land is now filled with a set of men who pretend to practise medicine, without resorting not merely to bloodletting, but many of the other remedies sanctioned by long and tried experience. And what is melancholy, but true, they find a ready sympathy in a large portion of the community. Whether I am too severe in attributing the popular empiricism of the day to the influence of Dr. Rush, must be left to the judgment of the profession. One thing, however, is very certain, and which we see illustrated every day. Whenever a person has been overtaxed with active medicine, he is apt to discard all belief in medicine generally, and he is then ready to fall into any absurdity. It is with medicine as it is with religion: superstition once thrown off, infidelity follows, and the result in both cases is the same. Calm reflection and rational inquiry are out of the question, and boasted independence speedily becomes the easy prey of the knave and the empiric.

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* Med. Obs. and Inqs., vol. 4, p. 300.

† To justify the language used above, and which may be considered too strong by some, let me make a quotation or two from Dr. Rush's celebrated "Defence of Bloodletting." "Bleeding should be continued while the symptoms which first indicated it continue, should it be until four-fifths of the blood contained in the body

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are drawn away." Med. Obs. & Inq. vol. 4, p. 353. The amount of blood in an adult is estimated at about 32 lbs. Four-fifths is over 24 lbs.!

Again, in enumerating the advantages of bloodletting, he says: "In cases where bleeding does not cure, it may be used with advantage as a *palliative* remedy. Many diseases induce death in a full and highly-excited state of the system. Here opium does harm, while bleeding affords certain relief. It belongs to this remedy, in such cases, to save pain, to relieve convulsions, to compose the mind, to protract the use of reason, to induce sleep, and thus to smooth the passage out of life." Med. Obs. and Inqs. vol. 4, p. 357. In other words, if I understand him, one of the advantages of bleeding is, that it makes persons die easily! This reminds me of a melancholy case which I once witnessed. A young gentleman, about eighteen years of ago, had been suffering about three months under organic disease of the brain. During this period he had been subjected to every kind of treatment. Bloodletting, emetics, cathartics, mercurials, tonics, &c., had all been used in succession, but without arresting at all the progress of the disease, and he had now become stone blind, was paralytic, and reduced to the extremest state of emaciation and debility. In short, he was barely kept alive by the use of stimulants. In this state of things a friendly doctor happened to drop in, and expressed the opinion that the disease was inflammation of the brain, and that a good bleeding would relieve him. Notwithstanding the urgent remonstrances of the attending physician, that the result would be almost immediate death, the idea took with his friends, and he was bled by the doctor who suggested the practice. As might have been expected, in about six hours he was a corpse, and the great consolation seemed to be, that he died so easily! Verily, on becoming acquainted with such practice, one would be tempted to believe that the Emperor Nero must have been a very tender-hearted man in condemning Seneca to so pleasant a mode of terminating his existence as bleeding to death. For the particulars, see the Annals of Tacitus, book 15, sect. 60.

ART. III.—*Epidemic Erysipelatous Fever*, as it occurred in Bethel, Fairfield Co., Conn. By H. N. BENNETT, M. D.

ALTHOUGH the history of Epidemic Erysipelas, as it has occurred in various sections of this country, has been written and re-written, yet I have thought it might not be wholly unimportant to publish a sketch of the recent epidemic which has prevailed in this town, and which has been attended with an alarming degree of fatality. Notwithstanding the great similarity between the general symptoms, the local lesions, and the mortality attending this disease, in every portion of the United States in which it has occurred, yet the veil which obscures its etiology, perhaps even its pathology, remains impenetrable to the vision of the most scientific investigator. Believing that every closely-observed fact, in relation to a malady of this character, may tend to elucidate some points of interest in relation to its cause, its nature or its effects, I shall give the history of this disease, as I have seen it, in its different phases, for a period of four successive months. The number of cases which I have had under my own direct observation and treatment during this time has been seventy-three. Although the disease prevailed throughout a large portion of the town of Danbury, still the *foyer* of the epidemic was evidently that section in which I am located, and I shall confine myself exclusively to an analysis of the cases which occurred in my own vicinity.

This epidemic was preceded by no unusual phenomena in the ordinary diseases incident to the autumnal months, with the exception of an anginose difficulty which occurred towards the close of several cases of typhoid fever. From the latter part of the month of August to Nov. 1st., I attended ten well marked cases of the ordinary typhus of New England, and in all of them, with but one exception, I observed more or less of the anginose affection. Two of these cases appeared to me to be cut short by the intercurrence of the pharyngeal inflammation, while in one other, the only fatal case, the patient evidently succumbed to its influence. Upon inspecting the throat of this individual, (a gentleman 50 years of age,) a day or two after the first complaint of soreness of that part, I found the pharynx, tonsils, velum, &c., lined by a thick muco-purulent couch ; this being removed, the mucous membrane appeared of a dark red color, and tumid ; soon after, the sub-maxillary gland of the left side became enormously swollen, and in proportion to the intensity of these local difficulties, the general symptoms became alarming, pulse 130 with some irregularity, respiration hurried, and death upon the fourth day after the first decided manifestation of the anginor. I consider it important to mention, that I made in this case an examination of the abdominal viscera after death, and that the lesions found were identical with those described by the French writers as occurring in typhoid fever. The ulcerations of the agminated follicles were numerous and deep, some of them extending to the muscular coat of the intestine ; the mesenteric glands were enlarged and softened, their section presenting a dark purple color ; the spleen was enlarged and softened to such a degree, that it could be literally *stirred up* with the finger. This examination was made in presence of Dr. Benedict, of Skaneateles, N. Y., a relative of the deceased, and I am thus particular in mentioning it, since Dr. Shipman observed a febrile disease very similar in its symptoms, which preceded the epidemic in the central part of New-York. He remarks, that the fever was "attended with diarrhœa, smooth red tongue with tympanitis, terminating fatally in a great proportion of the cases;" and also adds, "of the fever mentioned above, I will merely remark that it did not differ materially from the autumnal fevers of this section of the state, excepting its being more uniformly attended with gastro-intestinal irritation and inflammation, and its liability to diarrhœa, tympanitis and death." I cannot but suspect that this fever was no other than the *typhoid affection* of Louis, the *follicular enteritis* of Cruveilhier, &c. &c., and which is as much endemic to the north-eastern section of the United States, as it is to Paris.

About the middle of November, 1847, the epidemic may be considered as commencing in the form of a severe angina. The third case which I saw, that of an old lady of 81 years, proved rapidly fatal in consequence of the supervention of a bronchitis. A few days after this occurrence three cases presented themselves with external erysipelas. One had suffered a week previous from severe sore throat. The erysipelas was preceded in another by chills, fever, and a tenderness of the sub-maxillary glands, for a period of only 36 hours. The erysipelatous eruption was upon the face in the three cases. At the same time, a man of about 30 years of age, a son-in-law of the old lady who had died, was seized in the night with a violent chill, succeeded by acute pains in the limbs, particularly at the knee joints, rachialgia, headache, and febrile reaction. After a continuance of the febrile symptoms a period of 36 hours, the characteristic angina made its appearance. In twenty-four hours more he complained of intense pain in the left side, afterwards in the right, and died collapsed at the commencement of the seventh day of his disease. I made an examination of the thoracic and abdominal viscera. The right lung was adherent to the thoracic wall by means of loose pseudo-membranous adhesions, apparently the product of the costal sheet, which presented a general redness intermingled with arborisations, while the visceral pleura, after the removal of the pseudo-membranous productions, appeared nearly normal. Upon the left side there were no adhesions, but an effusion of a sanguineous serum to the amount of eight ounces, and the visceral serous membrane was of a dark red throughout its whole extent. The lungs on both sides were crepitant, and were evidently very little altered from the natural condition. *Abdominal cavity.*—The left lobe of the liver was very much hypertrophied. This was a chronic difficulty under which the patient had labored for several years. The section of the liver presented nothing unusual. The alimentary canal was very little changed from the normal state. The follicular patches, however, were preternaturally developed for two or three feet above the ileo-cœcal valve, and as is usual in all developments of this kind, the nearer the termination of the ileum, the greater the change. At a distance of thirty inches from the valve, the patches were slightly raised above the surrounding mucous membrane, and of a rose color. As I approached the valve, they were more prominent and studded with dark points, but none were in a state of ulceration. The spleen was of its natural size and consistence. The mesenteric glands were healthy.

From the period of the occurrence of these cases, up to the middle of March, 1848, the disease continued with nearly equal virulence.

Since this time no cases of importance have occurred, and the districts in which the epidemic prevailed have been ordinarily healthy.

Symptoms. Very great uniformity existed in the premonitory symptoms of this disease. Languor, chilliness, headache, neuralgic pains in different parts of the body more particularly in the occipital region and about the temples, succeeded by febrile reaction, were the constant symptoms which preceded the outbreak of the various local inflammations. The duration of the prodromus varied from twenty-four hours to several days or even weeks The pain in the back of the neck and about the temples I looked upon as pathognomonic, but considered it merely a reflection of the incipient irritation and inflammation of the throat. The functions of the stomach and bowels were not so seriously impaired, except in malignant cases, during the first stage of the disease; for although the tongue was slightly coated and some nausea, yet there was not a total disrelish for food, and the fecal evacuations were nearly normal. In the worst forms, however, of the malady, there was complete anorexia and vomiting the first day, the tongue soon became dry and brown, with dark sordes upon the teeth, and a slight tendency to diarrhœa. The urinary secretion was uniformly very much changed in quality and deficient in quantity. In one instance it resembled an unsettled decoction of coffee, and immediately threw down a brown deposite in considerable quantity. Generally it was of a brownish red color, and, as the patients expressed it, was *very thick.* This appearance of the urine was common even in the milder cases. The skin was generally hot and dry, but in some instances, especially in the puerperal cases, it was soon bathed in a profuse perspiration. Rarely it presented a jaundiced appearance. The frequency of the pulse was one of the most remarkable features of the disease. I have found it as high as 120 or 130 during the first forty-eight hours, and yet the patient would be sitting in a chair, and perhaps consider himself but little indisposed. It was small and easily compressible, indicating more a pulse of irritation than of inflammation. Sooner or later, inflammations of the different tissues of the body were developed, and upon the locality of these depended, in a great measure, the issue of the case. I have said, *inflammation of the different tissues*, perhaps I should say, inflammations of *the same tissue in different parts*, for I have almost adopted the hypothetical notion, that the primary seat of true erysipelatous inflammation is uniformly in the areolar structure. A very constant, and I am disposed to think, a uniform seat of inflammation in this disease, was the throat: for although some patients were wholly unaware of any anginose difficulty, yet upon inspection of the parts, more or less discoloration was always perceptible. All the mucous surfaces of the posterior fauces were affected, but presented different appearances in different individuals. In some there was a general deep red color of the mucous membrane, without ulceration. This redness was occasionally in patches, giving to the parts a mottled appearance, and in the majority of the cases, the deep red color of the mucous surfaces became soon changed by a sparse purulent secretion, giving to them a yellowish cast intermingled with red. I have seen the pharynx, in a few instances, completely covered with a layer of pus so thick as to blot out entirely the redness of the part. In others, the angina commenced with small circular ulcers, and sometimes pustules upon the tonsils and pharynx, evidently of follicular origin, and the redness of the mucous membrane was less marked, or nearly wanting. Rarely I have seen the whole throat unusually pale, tumid and semi-transparent, appearing as if œdematous. In all cases, without exception, there was more or less tenderness and swelling of either the sub-maxillary, parotid, or lymphatic glands of the neck, as well as of the tonsils, and the uvula was almost universally elongated; but I did not observe more than once or twice, the drop upon its point, mentioned by Dr. Peebles as so characteristic of the affection as it occurred in Virginia.

The erysipelatous efflorescence occurred in one-sixth of the cases. When it occupied the face, it was of a livid appearance, and was soon covered with large irregular bullæ, filled with serum of a slight yellow tinge. The inflammation involved both the dermoid and sub-cutaneous cellular tissues, and small abscesses occurred in various parts, more particularly, however, about the eyes in the textures of the superior and inferior palpebrae. In one case, a circular gangrenous eschar was formed at the internal angle of each eye, in the superior eyelid. In two instances, the erysipelas of the face was of an œdematous character, and occupied only the parts bordering upon the eyes. While the cutaneous efflorescence was progressing, the patients complained very little of the disease of the throat, but I became satisfied, by inspecting the parts, that it was not in consequence of the resolution of the angina, but upon the principle involved in the axiom, *duobus doloribus*, &c. Where the case progressed to a favorable termination, an abundant desquamation took place from the diseased cutaneous surfaces. In some instances, which commenced with the usual anginose symptoms, no external efflorescence occurred, but the cellular tissues in the axilla and beneath the pectoral muscle became the seat of inflammation, and enormous abscesses were the result. An old lady of 65 years had suffered for a few days with general febrile symptoms of little violence; upon visiting her in the morning, she complained to me of pain in the right fore-arm; I observed that it was somewhat swollen, but without discoloration; in eighteen hours the arm was gangrenous from the wrist to the shoulder, and death closed the scene. The rapidity of the gangrenous termination in this case, is unparalleled in the history of the epidemic as it occurred in this town, but was not the only instance of such termination. The other example of this character commenced with severe febrile symptoms, pulse 130 at my first visit, and an erysipelatous efflorescence covering nearly the whole of the internal part of the thigh. Several small gangrenous eschars were soon formed, which sloughed out, leaving ill-looking ulcers with abrupt edges, their bases formed apparently of dead cellular membrane. About the sixth day, there was a temporary abatement in the symptoms; the pulse fell to 80, the erysipelas faded, and I began to hope that the worst was told. In 24 hours from this time, I perceived the diseased limb was more swollen, a slight cutaneous blush accompanying the tumefaction, and another day disclosed a gangrenous strip, about three inches in width, upon the outer part of the thigh, extending from the head of the femur nearly to the knee. The result was inevitable. The patient died upon the tenth day of his disease, his limb already in a horrible state of putrefaction.

One of the most remarkable cases, and one which I think worthy to be given in detail, was that of my friend Dr. M. A. Shepard, who had just returned home from an attendance on lectures in New Haven. On

Saturday, February 19th, he visited, in company with myself, two very malignant cases of the epidemic disease. The next day he was seized with the usual pyrexial symptoms, attended with severe pain in the right axillary region. At my first visit, which was the day following the attack, I found him complaining bitterly of this local difficulty, which was increased by the least motion of the arm or shoulder. The parts were very tender to pressure, but no discoloration or perceptible tumefaction. I suspected the commencement of cellular inflammation, and intimated to the patient that he would probably have a pectoral abscess. I hoped for this termination, as in the four cases which I had already seen, the issue was favorable. My expectations in this respect were disappointed. Instead of suppuration beneath the pectoral muscle, the cellular inflammation extended rapidly over nearly the whole trunk, with occasional red patches upon the skin. The extension of the areolar inflammation occupied a period of about six days, and during this time the pulse never rose above 90, and the symptoms upon the part of the digestive apparatus were by no means alarming. The intelligence, however, became rather obtuse, with some incoherence; the face and conjunctiva slightly jaundiced; the urine did not exceed one ounce per day, and appeared, upon its first emission, like unsettled coffee. The throat presented the usual erysipelatous redness, but no remarkable tumefaction. At the commencement of the ninth day of his disease, the patient called my attention to a slight swelling of the tip of the tongue. In a few hours the swelling had increased to such an extent that the tongue could not be protruded from the mouth. It required but a few hours longer to produce such extensive mischief, as to completely suspend respiration, either by the encroachment of the tumefied parts upon the larynx, or by œdema of the glottis itself. He died at the commencement of the tenth day of his disease. This case presented the most extensive diffuse cellular inflammation of any which occurred during the epidemic, and was the only one accompanied with swelling of the tongue.

The following tables will serve to conclude the enumeration of the local manifestations of the disease, and also to exhibit its mortality and duration.

TABLE OF CASES WHICH PROVED FATAL.

No. of cases.	Local Manifestations of the Disease.	Age.	Sex.	Duration of disease.
1	Angina, with erysipelas of the face, and symptoms of meningitis with effusion.	34	fem.	20 days.
1	Angina, with erysipelas of the face and arm.	72	male	13 “
1	Angina, with erysipelas of face, together with symptoms of meningitis and pleuritis.	17	fem.	7 “
1	Angina, with pleuritis.	30	male	7 “
2	Angina, with bronchitis.	81 &70	fem.	2 & 6 “
2	Angina, with peritonitis or muco-peritonitis.	18 &32	fem.	7 & 4 “
1	Angina, with diffuse cellular inflammation of the leg and symptoms of pleuritis.	76	male	5 “
1	Gangrene of the arm.	65	fem.	4 “
1	Diffuse cellular inflam. of the leg and thigh terminating in gangrene.	32	male	10 “
1	Diffuse cellular influx of the whole trunk, with enormous swelling of the tongue.	35	male	10 “
2	Puerperal peritonitis.	19 &21	male	4 & 5 “
14	Total.			

TABLE OF CASES WHICH RECOVERED.

No. of cases	Local Lesions.
5	Angina, with erysipelas of the face.
4	Angina, with pectoral abscess.
1	Erysipelas of the neck, with enormous glandular engorgement, and suppuration.
1	Angina, with similar glandular engorgement, terminating in resolution.
1	Erysipelas of the leg.
1	Puerperal peritonitis.
46	Angina, with pyrexial symptoms of greater or less intensity, actually requiring treatment.
59	Total.

The ages of the patients included in this table varied from 8 to 75 years, and the duration of the disease varied from three days to as many months, the milder cases of angina occupying the one extreme, and the cases of pectoral abscess the other.

It will be observed from these tables, that the serous membranes were a frequent seat of disease, especially the pleura and peritoneum. I have included but three cases of puerperal peritonitis in the list. One other case occurred in a woman whom I attended at her accouchement, but who fell into the hands of an empiric after the attack of peritonitis. She died. These four puerperal cases were the only ones of the kind out of 21 females confined during the epidemic, all of which I attended. As the relative proportion of similar cases has not been given, in the various accounts of other epidemics of the same nature, I have no positive means of knowing whether this number is comparatively greater or less. Let this be as it may, it does not, to my mind, speak very strongly in favor of the doctrine of contagion from the hand and clothes of the practitioner. I have also a strong reason for doubting this view, in the fact that my own wife was confined during the height of the epidemic, when I was daily and hourly in contact with severe cases of erysipelatous disease, and yet she suffered no untoward symptom subsequent to delivery.

There was a very manifest difference between the symptoms in the cases of *puerperal* peritonitis and those which occurred independent of this condition. In the former there was much less abdominal pain and tenderness, little vomiting or diarrhœa, an extremely rapid pulse (130 to 160), and a very intense frontal headache, from the commencement of the attack; while in the latter, the pain in the abdomen was severe, with constant vomiting and diarrhœa, tympanism, cold extremities, a small, frequent pulse, and death in from 48 to 72 hours after the first symptoms of serous or muco-serous inflammation. I am disposed to consider the inflammation in these cases, as involving both the mucous and serous membranes, for they seemed to combine the symptoms of peritonitis with those of cholera morbus.

Etiology.—However numerous the speculations in reference to the causes of epidemics, science has been yet unable to penetrate their mysteries. I may be allowed to assert, however, that the influences which produce these diseases are not simultaneous with the first outbreak of the epidemic. They precede it for a longer or shorter period, and thus insidiously prepare the human constitution for the development of the morbid changes which are to follow; or, in other words, they establish an epidemic diathesis previous to the commencement of the work of death. It is not unusual that a fatal epidemic is preceded by one of milder form, or that there is a greater amount in a modified or aggravated form, of the ordinary diseases of the locality in which it is about to prevail, thus giving evidence that preparation is making for the onset. In the present instance, I have no doubt that the typhoid fever, accompanied uniformly with anginose symptoms, was the foreshadowing of the epidemic; but what were the anti-hygiène influences in operation, I am wholly unable to surmise. The season presented nothing unusual—no extraordinary atmospheric phenomenon, and no tangible evidences of morbific effluvia. I have no new hypothetical views to offer upon this point, and believe that a long-continued series of correct observations, made with reference to atmospheric changes, deterioration, density, electrical condition, together with an examination into the dietetics and general regimen of the infected population, is the only method of investigation likely to reveal the arcana of epidemics.

The question of contagion is an important one, and deserves a rigid investigation. In the epidemic now under consideration, the evidence was very strongly in favor of its contagious nature. The first case which occurred was that of a gentleman, at whose house the old lady was visiting who died a few days after. The next fatal case was that of her son-in-law, who was in constant attendance upon her during her illness. Three other cases, all of the anginose character, occurred in the same family immediately after. An old gentleman of 72 years, died of erysipelas, and three of his children contracted the disease. These were also in the anginose form, and two of them very severe. Two ladies from a healthy district went some distance to watch with an acquaintance suffering from erysipelas of the face: they returned home, and upon the third day after, were both seized with the usual symptoms of the epidemic. The gentleman who died with a gangrenous leg, was a member of a secret society, and was attended by his brethren as watchers: one of these from a perfectly healthy, and two from the infected district, were soon after seized with the disease. It would be useless to enumerate all the circumstances of this character. The evidence in favor of contagion was certainly startling, and popular opinion became fixed in that direction. I could not but incline to the same view, with certain restrictions. Large numbers of those who attended upon the sick entirely escaped the disease; and the natural inference is, that a participation in the epidemic diathesis was a necessary predisposing cause in those persons who did contract the disease from contact with others. The evidence of fomitic contagion with reference to the puerperal cases, I have given in another part of this paper. It is certainly very meagre, and I may here remark, that upon a question of such moment, the most unqualified proof should be adduced, previous to adopting an opinion so repugnant to the feelings of the accoucheur, and so alarming to the community.

Treatment.—The treatment of the cases which fell into my hands was conducted upon general principles, and according to the circumstances of the case. In those of an anginose character, unaccompanied with any other local inflammations, my success was uniform, and unattended with the loss of a single patient. My treatment of these cases was also very uniform, consisting, in the first place, of an emetico-cathartic, the formula of which I think proper to give. It is simply the ordinary emetic solution of tart. ant. et pot., to be taken every half-hour until emesis is produced, in connection with a strong decoction of eupatorium, the latter to be drank freely during the intervals of taking the antimonial solution. This method of giving these medicines scarcely failed in a single instance to produce an emetico-cathartic effect, and to afford at least temporary relief to the patient. Vesications upon the neck, with emp. canth. was the remedy next in order, and many times acted like a charm in relieving the excessive soreness of the throat. Frequently I applied, also, a strong solution of nitrate of silver, directly to the inflamed mucous surfaces. This constituted the principal part of the treatment in a majority of the anginose cases; but in some, in which there was a continuance of the fever after the abatement of the local difficulty, I administered freely an infusion of bark, with evident advantage. In the more malignant cases, accompanied with the erysipelatous eruption and diffuse cellular inflammation, I also mainly depended upon bark, with an infusion of serpentaria and mild laxatives during the first stages, and afterwards upon the more powerful stimulants, such as ammonia, wine, brandy, etc. In short, although frequently perturbative at the onset, my treatment was in the main decidedly tonic and stimulating; and it was only in the cases of serous inflammation that I departed from this plan. In these I used calomel and opium largely, but without success, except in one case of puerperal peritonitis. In this I have no doubt, that the free use of the mercurial, combined with opium and digitalis, saved the patient. With reference to the external applications to the erysipelas, I at first made use of my favorite remedy, namely, arg. nit. in strong solution; but perceiving no benefit whatever, I abandoned all external remedies, with the exception of cooling lotions to allay the heat and smarting of the inflamed parts. In the case of glandular engorgement of the neck, which I succeeded in resolving, I administered bark internally, applied the vesicatory to the tumor, and afterwards rubbed it freely with ung. iod. pot.

Translation and Notice of articles from "Zeitschrift für die gesammte Medicin," etc., herausgegeben von Dr. F. W. Oppenheim, in Hamburg, Germany. Band 28, Heft 1, p. 1. By T. A. Kellkamph, M. D., New-York.

Art. IV.—*Remarks on the Effects on the Mind and on the Intellectual Faculties of some Medicines.* By Dr. Weber, of Hanover, Germany.

This article has been called forth by an essay on the same subject by professor Otto, published in that Journal, with the object of directing the attention of medical men to the effects of certain medicines on the mind. Dr. W. contends, that a sufficient number of facts were to be found in our literature on this subject, and that they would prove highly useful in the treatment of diseases, if judiciously chosen and if their indications were particularized. To accomplish a part of this task is the main object of his communication. After having spoken about the summary manner in which Prof. O. had treated on some medicines—Musk, Castoreum, Wine, Æther, Ammonia and its preparations, in regard to which he (Prof. O.) had made the general remark that they increased the imagination and "the reasoning powers"—he enters upon a discussion on the course to be pursued in making the necessary experiments with medicines to learn their relation towards the different organs of the body and their effects upon the mind. Of his account of the effects of some medicines we give the following extracts:

The first effects of musk, (direct or positive,) according to Joerg's observations, are: Absent-mindedness, disturbed power of reasoning, inability for mental occupation, confusion of ideas; afterwards giddiness and heaviness. Other observers, as: Cartheuser, Tralles, Kranz, Fr. Hoffman, add, that it also produces headache, fainting, sleepiness, irritability and fear. The secondary (re-actionary) effects of the medicine in the healthy subject, resulting from the conflict of the vital forces, (healing power of nature,) are directly the reverse of the first. In a body suffering under disease, the vital power re-acts against the disease; health is thereby either restored or not; in the latter case, the medicine employed produces, according to the design of the physician, in the diseased system or organ or in other distant organs, (according to the laws of antagonism,) new relations and effects, which necessarily are followed by a re-action; this is called the healing effect of medicines. He is of opinion, that on this, all knowledge of medicine depends. From the above statement he infers that Prof. O., in stating the effects of musk, castoreum, ammonia, etc., had mistaken the healing for the first effects.

Without discussing the merits of the preceding remarks of Dr. W., we proceed to make some extracts respecting the effects of medicines, which are perhaps new to some readers.

Of castoreum, he continues, our knowledge as to its effects is so uncertain, that we might say of it, as Hebel does with regard to comets, of comets we could say a great deal, because "we know very little about them."

The observations respecting carbonate of ammonia are numerous. Wilmer, Schreter and others enumerate the following as its (first) effects on the mind: seriousness, disposition to weep, with thoughts of death, melancholy, sadness; in the afternoon fear, as if one had committed a crime, sighing; supernatural fear, restlesness, irritability, forgetfulness, absent-mindedness when narrating, passes easily from one thought or idea to another, which he utters contrary to his will; drowsiness, heaviness in the head, etc.

He infers, that consequently the circumstances under which musk would produce a healing effect on a diseased mind, were very different from those under which a similar effect of ammonia could be expected.

Phosphorus is ranked among certain medicines which are considered peculiar in their first effects, producing in different cases effects reversed to each other; veratrum album and nux vomica, for instance, produce sometimes costiveness, at others diarrhoea; opium sometimes produces sleepiness, comatose sleep, sometimes sleeplessness; cures a diarrhœa in consequence of fright, cold, etc.; and on the other hand, it is the appropriate, sometimes the only efficient remedy against costiveness, delirium tremens, passio iliaca, ignatio amara; wine, etc., belong also to this class.

The effects of phosphorus are stated to be by Lobstein, Bouttaz, Le Roi and others, extraordinary excitement of the generative organs, irresistible desire for coition; by others, want of erections, total impotence, aversion to coition. It can be explained accordingly, as the author thinks, why phosphorus was recommended and found effective in cases of diseases of the genital organs, very dissimilar to each other. The remarks on phosphorus are concluded with the statement of the known result of all observations on the efficacy of this medicine, that it rarely proved beneficial in cases characterized by want of desire for copulation, with debility of the sexual organs.

Iodine. After having mentioned its abuse, its deleterious effects on the body, illustrated by innumerable cases; Richter, Joerg, Gairdner, Küntzli, etc., are quoted, who have observed its effects upon the mind, to be a *peculiar* despondency, together with fear, anguish, care, sadness, continual disposition to weep, (Perrot,) great aversion to serious mental occupation, etc. Finally, he speaks of the known, sometimes fearful effects of *cantharides* on the sexual organs, their abuses, but more especially on their effects on the mind, with particular reference to their efficacy in cases of hydrophobia, as well to prevent as to cure an attack of that disease.

Prust's observations are quoted: that during a period of eighteen years no individual, bitten by a mad dog, was affected with hydrophobia after a prophylactic treatment with cantharides. They are confirmed by Axter, physician to the general hospital in Vienna, who treated for thirty years all patients bitten by rabid animals and received in the hospital; he cured three patients after the first characteristic symptoms of hydrophobia had set in. Prust also cured a case by this medicine. How does it happen, Dr. W. asks, that at present, after such favorable results in the treatment of hydrophobia of distinguished observers, known for their acuteness, hardly one patient dies less of this fatal disease, than one hundred years ago? He explains this fact by the inconsiderate use made of a number of medicines, highly praised at a time, but soon as ineffectual abandoned, and by a want of individualizing of cases. Cantharides are no specific remedy in all cases of hydrophobia, and therefore other remedies were sought for; there are cases where belladonna, and others where stramonium answer all indications better than cantharides.

The healing effects of cantharides are explained by its first effects on the healthy system, which are enumerated as resembling the symptoms of hydrophobia, according to Wendt, Graaf, Orfila, Biett, Horn, Jahr, Giulo and others. In regard to the dose of cantharides, he recommends, in conclusion, to begin with *small* doses, (instead of combining larger doses with camphor, the most certain antidote to cantharides,) because, referring to Giulo's observations, a few drops of the tr. cantharides are sufficient to produce sometimes a fearful irritation and great changes in the system; and that in this respect, as in all cases, the constitution, the irritability of the nervous system, the severity of the case, etc., have to decide. This article contains a good selection of reliable observations, but the views on the effects of medicine expressed in it, add, in this respect, nothing to our knowledge in therapeutics.

A course of experimental investigation, corresponding to that pursued in other branches of the natural and medical sciences, upon which their rapid progress has been dependant, was of late adopted also in therapeutics, and a sound foundation has already been laid by tracing the material changes, and by numerous discoveries in regard to the physiological re-action *peculiar* to the different parts of the body in their healthy and diseased state, produced by irritamentia.

We cannot wonder that therapeutics, as a branch of medicine, dependant upon others, viz: physiology, pathology, pathological anatomy etc., were comparatively little cultivated; but well may we be surprised, that at present the views expressed in the article under consideration are not more comprehensive, and that a course of investigation, respecting the efficacy of medicines, is recommended, promising but partial results, and which cannot lead to correct general views.

From the same Journal, B. 28, Heft 1, No. 2.

Art. V.—*The Hospitals for Syphilitic Patients in Paris, and the Medical Treatment in the same.* By G. S. Boeneck, of Altona, Germany.

This article contains, in its beginning, some historical facts not generally known, which prove how great the dread of syphilis was in France when it first became known there, in 1495, and which aid at the same time to explain how it was, that this dreaded disease (besides its more contagious character at that time) spread in a comparatively short time over the different continents. No measures were taken any where to check the progress of the disease; no hospitals were opened for the reception and treatment of syphilitic patients. The measures taken had the very opposite effect of what was contemplated. It was decreed by parliament, "that all affected with syphilis should return to their places of residence, and that they were not to return from thence, or to leave their places of refuge, under penalty of death."

The patients were sent to the so-called "petites maisons," and at a later period they were received into the Bicètre, and into the Salpetrière. Half of them slept, four in one bed, from 8 o'clock P. M. to 1 o'clock A. M.; the other half, from 1 to 7 o'clock, A. M. The wooden cells or boxes in which they were placed, were without windows, and not ventilated, and the patients had to wait from six to twelve months before they were medically attended to.

During the reign of Louis XVI. great improvements took place in the state of affairs, but more important changes were effected in this respect in the course of this century.*

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* In a comparatively new country like the United States, where medical and other public and private institutions have been established in quick succession, for the benefit of the poor, by state governments or by the efforts of private citizens, it is no matter of surprise, that little or nothing has been done for syphilitic patients, who, as yet, have not been considered as fit subjects for hospitals. But after what has been accomplished for the improvement of the condition of the sick and infirm, it is time that—as a measure of medical police—hospitals, or at least sections of them, should be opened for the reception and treatment of syphilitic patients. For, if not before long such measures should be taken for this class of patients, syphilis—by no means a rare disease in the larger cities of the United States—will spread to such an extent as to leave no more a doubt about the necessity of their adoption.

A few suggestions which presented themselves while we were reading this article, will not be regarded, we hope, out of place here.

In the second part of the article some statistical facts are communicated respecting the two principal hospitals for syphilitic patients in Paris.

Hôpital des Vénériens, or, du Midi ; Faubourg, St. Jaques. Since 1828 men only are received. It contains 400 beds. 1837, 1 patient died of 203 ; the average time of duration of treatment, 38 days ; the number of patients treated in the hospital amounted, in 1837, to 3,376; in 1840, to 3,730. Among the physicians of this institution, Ricord is distinguished both for his genius and his joviality (good humor ?).

Hôpital de Loureine (Rue de Loureine), destined for the reception of syphilitic women, those excepted who fall, as prostitutes, under the jurisdiction of the police. The latter are sent to St. Lazare. In the Hôpital de Loureine are treated besides, women suffering under chronic scrophulosis, which, in some of its forms, resembles syphilitic affections. Hugier and Cruveiller are its principal physicians. In 1840, 2,083 were treated in this institution ; average mortality, 1 in 50 ; average duration of treatment, 50 days. The treatment in both hospitals is very similar.

The last part of the article, in which Ricord's views on the different forms of gonorrhœa, and of chancres, and on inoculation, are communicated in a clear and short way, together with a synopsis of his favorite medicines—does not allow of an extract.

In regard to inoculation, recommended by Ricord, the remark may find here a place, that his views on that subject have not been adopted beyond his personal sphere, because the expectations raised at one time as to the practical importance of inoculation for the diagnosis and treatment of syphilis, have not been realized.

Dr. Theo. Tellkampf.

From the same Journal, B. 28, Heft 2, No. 3.

Art. VI.—*Observations upon certain Remedies against Hooping Cough.* By E. A. Pank, *Physician to the Alexandrian Orphan Asylum in Moscow.*

Assafœtida, recommended by Kopp during the convulsive stage of hooping cough as the best remedy, employed in several epidemics, had in a number of cases in Moscow, no other effect than to lessen the cough and to make the paroxysms less seldom, without shortening the duration of the disease.

Muriatic acid was first employed, and justly praised as a valuable remedy against hooping cough, by Dr. Thiel. The author found it to be particularly beneficial, when, after the inflammatory stage of the disease was over, each paroxysm ended with throwing up a considerable quantity of a white fluid, resembling white-bread dissolved in milk or water; in cases, therefore, where the functions of the mucous membrane of the stomach are morbidly changed, he prescribed a table-spoonful every hour of the following mixture : ℞. Acid mur. ʒ ij ; Aq. distil. ℥ vj ; Syr. simpl. ʒ ij ; but regrets, with Dr. T., that it could not be given safely to infants in a sufficient quantity to effect a cure.

In the treatment of *complicated cases* are recommended : 1*st. Calomel*, if convulsions supervene or inflammations requiring its use ;

2d. *Ol. Jecocaselli*, if the children are of scrofulous diathesis. Histories of various cases are given, all of which tend to establish its beneficial effect in the treatment of hooping cough; 3d. *Chin. sulph.* if the patient should suffer from intermittent fever (one case).

The author dissuades, on the other hand, from the use of belladonna; which he never employed in the treatment of hooping cough, considering it as too dangerous a remedy. Flor. zinci, musk, ipec., etc., he deems preferable, should the spasms become excessive; but the relief produced by narcotics, he adds, is merely a temporal one. He draws the conclusions that experience had shown, that a specific remedy against hooping cough did not, and could not exist, and that the treatment ought to be adapted to each individual case.

In an appendix to the article, some observations are communicated in regard to the efficacy of tannin in the convulsive stage, highly recommended by Dr. Tucks and others. It was employed with sugar in the form of powders; half a grain per dose four times a day, and used for a month and longer in succession.

Of ten patients, aged from 9 to 11 years, generally of a healthy constitution, one girl was cured in a remarkably short time, but the others recovered no sooner than they would have done under another course of treatment. In four cases the use of other remedies became necessary to effect a cure.

A light diet without meat for the first few weeks contributed evidently to shorten the disease.

Dr. THEO. TELLKAMPF.

ART. VII.—DR. TRENOR AND AMALGAM.

BY THOMAS E. BOND, M. D., OF BALTIMORE.

Editors of N. Y. Journal of Medicine and the Collateral Sciences.

Gentlemen,—I have lately seen a number of the Dental Intelligencer, which contains an article copied from your Journal, entitled "Observations on Amalgam, with cases, by John Trenor, M. D., Dentist—which is concluded in the following words: "Let it be borne in mind, that the foregoing remarks and cases are placed before the profession, not so much from a confidence in their intrinsic value, as with the hope that they will elicit further investigation and discussion, which, it will be readily admitted, are the main springs to improvement."

We are to understand then that Dr. Trenor does not consider his cases to be so positive, and the inferences he has drawn from them so logical, as to be entirely conclusive. He is somewhat doubtful of their "intrinsic value," or else he could have nothing to expect from that "further investigation and discussion which he hopes to elicit." We therefore need make no apology for noticing his article, since we are thereby, in our humble way, doing what we can to fulfil his "hope."

The public are very much interested in the settlement of this "Amalgam" controversy. If the article in question be the hurtful thing which many dentists declare it to be, then it is of great importance that its noxious qualities be so generally known as to prevent any further suffering from its use. If, on the other hand, as many other dentists assert it to be, an innocent article, it is almost equally important that its use be no longer impeded. The controversy, for the most part, has consisted in alternate and conflicting statements of observations made by dentists professing opposite opinions upon the subject in question: on the one hand, recording numerous cases of serious injury from the use of "Amalgam;" on the other, offering a negative testimony to the contrary of those positive assertions, or even, as in the instance of Dr. Trenor, endeavoring to show that great harm has been done by removing the article from teeth in which it had been inserted. A discussion of such a character as this is necessarily interminable. The 'cases' are the witnesses, and these are never brought into court. The details are given by the party whose views they are intended to support; no opportunity is afforded for cross-examination; and as it is very possible that the prejudiced observer may have omitted to perceive important circumstances, exaggerated others, and although himself honest, entirely misrepresented the whole, it is evident that no statement can be, *per se*, positively decisive. Were I to decide to-day upon the testimony of the most positive character, that Amalgam is pernicious, there is no certainty that a counter-statement appearing to-morrow may not once more unsettle my faith. Were I to show most conclusively that the facts recorded by Dr. Trenor are at the best equivocal in the evidence they give, and that his inferences are not logically drawn from them, I should only do a partial service to truth; for Dr. Trenor or some other gentleman might immediately advance other facts and other inferences, which in their turn must be examined, and this process may proceed until both parties shall be wearied, but neither convinced.

It is not my purpose in this article to confine myself to the examination of any one witness, but to present to the reader the few simple yet cogent reasons which fully satisfy me of the deleterious character of this Amalgam, when used for filling teeth.

In the first place, it is not necessary that the question shall be decided upon by the merits of the reports of cases pro and con. Such a mode of determination is reasonable enough, but very difficult; and moreover, although it may afford certain conclusions to the unprejudiced, it carries with it no controlling power over the reluctant minds of partisan opponents. Decision here must be by fair comparison and just inference; but thus to compare and thus to infer, requires sound judgment and the unprejudiced use of it; and experience teaches us not to suppose that all men, or even most men, possess the quality or condition of mind required.

Were there, however, no other way to truth in the premises, I think that an unprejudiced man, after examining the conflicting opinions of dentists, would speedily and certainly decide the question against "Amalgams." Let the state of the controversy be fairly exhibited: On the one hand, a very large number of the most respectable dentists formally agree and declare that abundant individual experience, drawn from a large number and great variety of observations, has fully convinced them that "Amalgam" is often a noxious article, both to the tooth in which it may be inserted, to the parts adjacent and contiguous, and to the general health of the subject; and so firmly are they convinced of this, that they refuse to acknowledge as correct practitioners any who continue to use the article denounced.

Now it gives great force to any testimony, that its tendency is against the interests of the witness. For unless a man be insane, he will not say anything falsely or unnecessarily to injure himself; and moreover, as all men are supposed to have their interests continually in view, it is admitted that all are predisposed in favor of such opinions as are manifestly most likely to lead to advantageous consequences to themselves. This predisposition is a strong opponent of undesirable truth, and when it is overcome and the man convinced both against his will and interests, this fact affords strong evidence, both of the honesty of the testimony and the force of the reasons which have compelled the decision. It is true that in the case of a solitary witness the circumstances might not be conclusive of the correctness of his opinions, though they would be of the honesty of his purpose. One man might be insane or over-credulous, or defective in judgment; but where similar evidence is given by a hundred men, and these, too, men who of all others have had the best opportunities for investigating the truth, and who must be considered, from their professional habits and character. capable of observing such facts as they have stated, then the evidence is irresistible, and no opposing testimony short of the proof of sinister purpose and foul conspiracy can shake it.

Should others declare that they have not made similar observations, the assertion, however true, would be a mere negation, which could have no weight in a case where positive contrary testimony is offered.

The American Society of Dental Surgeons stands before the bar of public opinion, to testify against their own individual interests. Were "Amalgam" what its friends suppose, it would be as precious to the gentlemen composing this Society as to other dentists. It would increase their business, diminish their labor, and so lessen to them the cost of operations, as to save to them a very large amount of money. They are, therefore, honest; and inasmuch as their natural regard to their own interest has been subdued by the force of arguments, those arguments must have been very cogent, not to have been withstood by reason or selfishness. Again: they certainly have had good opportunities to observe the effects of "Amalgam fillings," and as they are known to be men of intelligence, it cannot be supposed that they are incapable of making the necessary observations. Whatever objection may be made to the value of the testimony of any one of these men, the aggregate worth is indisputable.

On the other hand, a number of individuals testify that they have not seen the evil effects which others have attributed to Amalgams; or, if they have seen cases similar to those adduced by some of the anti-amalgam party, they trace the consequences to other causes.

It is a material fact with regard to this evidence, that the parties who appear for the defence are, a few dentists of good reputation, and—all the quacks in the country. We would therefore naturally be inclined to examine their testimony very closely; for though empirics may be right, they are not very likely to be so. There is, however, respectability enough in Dr. Trenor, and some others of the party, to serve as salt for the rest, and therefore we will make no special objection to them.

In view of the remarks made previously we must remember, that if evidence contrary to interest be strong, testimony in favor of interest is proportionably weak; and if the fact of the first make the accumulated positive evidence of capable men irresistible, the fact of the second begets a doubt which merely negative evidence, always weak, cannot by any means dispel.

Nor is it sufficient to show that any one of the witnesses against

Amalgam, has been mistaken in any particular cases, in attributing certain appearances to a certain cause. Could Dr. Trenor show this, and he has not shown it, it would create a suspicion of the soundness of the judgment of the single man. It would not even destroy the validity of his whole testimony, since, though mistaken here, it would not follow that all his observations have been similarly unsound. The defence has to do with the whole accumulated mass of evidence, and nothing short of proving evil purpose and malign confederation can shake the testimony.

I have stated previously, that the decision of this question does not depend upon the inference to be drawn from conflicting observations. It may readily be settled by an appeal to science.

'Amalgam' is composed of mercury and silver, in chemical union—were the mercury set free, and were it acted upon by the fluids of the mouth, or were it carried into the stomach, then all the evils would ensue which have been attributed to it. It follows, therefore, that the whole question turns upon the capability of the several matters with which Amalgam may meet in the mouth, to act chemically upon it. Can they so act upon it? At first I should have supposed that none would dispute the affirmative. But it is disputed, and Dr. Trenor disputes it.

I am pleased, that it is not necessary for me to examine Dr. Trenor's chemical opinions very closely. As they are, so far as I know, entirely peculiar to himself, and never before communicated to the public; as none of the chemists seem to have studied his system, or to have been aware of the facts he has stated, it might be presumptuous for one who claims to possess no more than an ordinary knowledge of the science, to enter the lists with that gentleman. Fortunately we have positive evidence in the matter, and the man who adduces facts must always have the advantage of the man who suggests probabilities. Dr. Trenor says, that Amalgam *cannot* be chemically changed in the mouth, so as to produce active mercurial agents. Now if we can show that it *has* been so changed, his argument is rendered nugatory, for it has led him to a "deductio ad absurdum," viz., to conclude, that the theory could not be which has been. As one unquestionable fact is as good as many, I will content myself with that stated in the following letter.

Mr. James R. Chilton, well known as a distinguished chemist of New York, thus writes:

New York, Nov. 13th, 1847.

E. Parmly, Esq.

Dear Sir,—In accordance with your request, I have made a chemical investigation of the various decayed teeth which you handed me, the cavities of which were more or less filled with the Amalgam of silver and mercury. These teeth presented the appearance of having been filled a long time previous to being extracted. The metallic filling of each was quite black, and in some it was of a porous or spongy texture. Upon breaking open the teeth and removing the filling, the cavities to a considerable depth were found to be greatly discolored: some being quite black, and in one it was of a dark green color which extended even to the extremity of its roots.

From the various experiments which I have made, both upon the external surface of the Amalgam found in the cavities of these teeth, and upon the discolored portions of the teeth themselves, I have no doubt that the discoloration has been produced by the decomposition of a portion of the Amalgam by the agents with which it has come in contact in the mouth, thereby producing both oxide and sulphuret of mercury with a portion of sulphuret of silver.

The tooth, the root of which was colored green, contained oxide of copper, no doubt derived from the Amalgam, which may have been made by mixing mercury with the fillings of ordinary silver coin, which always contains a portion of copper.

Very respectfully yours,

James R. Chilton.

Unless I can be convinced that Mr. Chilton is ignorant of the elements of his art, or atrocious and mendacious, I shall certainly believe that the facts of chemistry are against the Amalgam dentists; and if chemistry be against them, I care not who is for them.

Baltimore, March 18*th*, 1848.

Art. VIII.—*An Essay on the Nature and Curability of Heterologous Tumors.* By N. S. Davis, M. D., 362 Bleecker-street, New-York.

It is well known, that the late and extensive researches in pathology, and morbid anatomy, have resulted in the division of *Tumors* into two great classes. The first class includes those tumors whose structure bears a resemblance to, or is identical with, some one of the natural tissues of the body. These are called *Homologous*, and are mostly of a mild and non-malignant character. The second class includes all those tumors whose structure is essentially different from any of the natural structures of the human body, and hence they are called *heterologous* formations. This class includes the several varieties of carcinoma, and the tuberculous, scrofulous and typhous deposites, and are all essentially morbid in their character, passing through a regular series of changes, and terminating, when left to themselves, either in destruction of the part or the death of the patient, and sometimes both. But it constitutes no part of our present purpose to enter into a description of the microscopic appearances, or the morbid anatomy of this class of tumors. This has been done with great minuteness and accuracy by many eminent modern investigators, and from their labors we are enabled to draw two or three important conclusions. The first is, that all the *heterologous* tumors or formations, consist essentially in an accumulation or deposite of *new matter*, unlike any of the tissues of the human body. Second, That these deposites may occur in any of the tissues composing the animal system, but are much the most frequent in the cellular or æreolar, and glandular structures. And third, that they all tend to induce certain actions in the parts affected, and to undergo, sooner or later, certain changes, such as softening, conversion into pus, &c. Thus far we may regard the work as completed, the conclusions well settled; and still the diseases to which they relate, especially those of the *tuberculous* and *carcinomatous* character, constitute the chief *approbria medicorum* of the present day. Hence, practically speaking, we are very little wiser in regard to these affections than were our fathers; the early employment of the surgeon's knife being regarded as almost the only practical resource of our art, and even that, of very doubtful propriety. And if we regard the frequency of their occurrence, their protracted and painful course, and their almost uniformly fatal tendency, we shall readily agree, that humanity does not call more loudly for the rigid and persevering investigation of the causes and curability of any one class of diseases, than this. Upon this task, therefore, we shall enter with all the patience and scrutinizing care with which nature has endowed us; and for the sake of clearness and method in our work, we shall take up the following questions, in the order in which they are stated, viz: 1st. If tuberculous and cancerous deposites are real accumulations of new matter in a normal tissue, do they arise, *ab initio*, from constitutional causes producing a morbid condition of the blood, or are they the result of a morbid action of the capillaries of the part, while the state of the blood and the constitution becomes affected only secondarily? 2d. If they arise from a primary morbid condition of the blood, what are the circumstances and conditions of the system, that give rise to such morbid condition? 3d. What is the prognosis, and the general indications of treatment?

Perhaps there is no more difficult task than that of tracing the relations of cause and effect, and of maintaining, at all times, the true order of sequence in the development of disease. And, yet, on this depends the entire value of all our conclusions. Thus in the development of a cancerous affection, we have a local mass of disease, a morbid condition of the circulating fluid, and general or constitutional symptoms; and it is plain, that the therapeutic indications will depend entirely on our conclusions in regard to the order in which these are developed. For instance, if the local affection is the first link, the primary step, then the old practice of early and complete extirpation is the only rational indication; while if the constitutional disorder is first, and the local deposite only a result, such a practice would be the merest folly. Our first question is, consequently, one of great practical importance, and requires for its proper solution an extensive review of cases, and a minute attention to their individual history. If we are not much mistaken, the prevailing opinion among the mass of the profession is, that cancerous or malignant tumors are strictly local in their commencement, and only affect the constitution secondarily. It is on this account, that most modern investigators have directed their principal attention towards the establishment of the early diagnostic marks of the disease; the ability to distinguish the nature of the tumor, and to remove it at a period anterior to its implicating the general health, being considered the point of chief practical value. We know that many of our most eminent surgeons and pathologists, now entertain a different opinion, regarding the tumors as mere outward signs of constitutional derangement. But Sir E. Home tells us that, "from the facts which have been stated, it appears that cancer is a disease which is *local in its origin.*" And Mr. B. Bell says, "from these and many other authenticated facts which, if necessary, might be adduced, of the success attending the extirpation of cancers, there is, it is presumed, very great reason for considering the disease, in general, as a *local* complaint, *not originally connected* with any disorder of the system." The descriptions and recommendations of several other eminent surgeons would lead us to the same inference; while, in an American work, only just issued from the press, we find the following language, viz: "Cancer, like other heterologous products, tends to softening, and until this process is set up, the *injury* occasioned by the disease is *purely local*, and consists in atrophy of the tissues, and other effects of pressure. On the occurrence of softening, however, not only do the adjacent parts become inflamed, ulcerated, and corroded by the ichorous discharge from the cancer, but this fluid may cause inflammation of the adjacent veins and lymphatics, or, *being conveyed into the blood*, give rise to that peculiar earthy color of the skin, and to disturbances in the nutritive and nervous function, which, taken together, constitute what is called the *cancerous cachexia*. Moreover, partly by the absorption of cancer cells, and partly through the influence of the constitutional diathesis, new tumors may arise in parts of the body more immediately connected by veinous and lymphatic trunks with the original seat of the disease, or in organs more remotely situated."*

On the other hand, Dr. George Macilwaine, in his work on Tumors, published in London in 1845, asserts, that "the original *cause* of no tumor can possibly reside in itself; because the cause must necessarily have preceded the tumor." Again: he says, that, "strictly speaking, we are ignorant of the causes of tumors; at the same time, by a careful observation of facts, we can educe very important general conclusions. 1st, that they are connected with *certain* conditions of the system; 2d, that these are conditions of *disorder*, and that in many cases we can arrive at correct general ideas of the *nature* of such disorder," &c. These extracts are sufficient to show, that the important question, whether heterologous tumors are of local or constitutional origin, is by no means settled, even among the most intelligent members of the profession. Hence we must proceed to an examination of all the facts within our reach, bearing on this point. And first, do cancerous and tuberculous diseases ever arise from *hereditary* influences? Perhaps no question pertaining to medical science is more firmly settled in the affirmative than this. The only way that the advocate of the local origin of cancer can account rationally for its hereditary transmission, is by supposing that the *cancerous poison* of Home, or the cancer cells of more recent investigators, being in the blood of the parent, is transmitted directly into that of the child, thereby influencing its development, and laying the foundation for the same disease. For it must be remembered that this class of pathologists regard the extension and propagation of cancer, as the result of the absorption of a specific poison from the cancerous tumor itself; as seen in the above extract from Dr. Stillé's late work. But if this doctrine was true, we ought to have children born with cancers; or, at least, we should have cancerous diseases developed most frequently in childhood and youth, in the same manner as by the transmission of the syphilitic virus. And yet every physician knows that, with the exception of the soft or spongoid form of cancer, the disease is exclusively one of adult life, occurring very rarely before the age of 30 years; a period, indeed, during which the blood must have undergone so many complete changes, that we can hardly suppose any specific poison or cancer cells could have been retained to constitute the nidus or commencement of a new tumor. We are aware that Sir E. Home and others endeavor to avoid this difficulty, by contending that it is not the disease which is transmitted, but "*the predisposition only*." But pray, what constitutes this *predisposition?* It can certainly be nothing more nor less than a peculiarity of constitution, a cancerous or tuberculous diathesis; by which we simply mean such a condition of the solids and fluids of the system as is favorable to the formation and deposition of cancerous or tuberculous matter. But this again is only another mode of expressing the *constitutional* origin of the disease, and therefore concedes the whole question. Hence we shall assume it as settled, that so far as these diseases are hereditary, they are of constitutional origin. Second, are those cases in which no hereditary influence can be traced, primarily local? So far as typhous and scrofulous deposites or tumors are concerned, no intelligent physician now thinks of regarding them in any other light than as constitutional diseases; and, indeed, the same may be said of the tuberculous also. Hence, whatever argument can be founded on the analogy of the other heterologous formations would be strongly in favor of regarding the different varieties of cancer also as constitutional diseases. And if we examine with due care the history of every case, we shall find abundant evidence to confirm the inference drawn from analogy. Thus, far the greater number of cancers in the female make their appearance about the time that menstruation ceases. This is especially the case with the hard or scirrhous variety, which is so often found in the mamma and uterus. Thus Sir A. Cooper tells us that he does not recollect more than two cases of this kind, in females under 30 years of age; and Sir C. Bell says, that "true carcinoma of the breast belongs to that period when the uterine functions cease." Indeed, so generally is this acknowledged by surgeons at the present time, that the age of the patient is regarded as an important item in making up the diagnosis in doubtful cases. But if the disease is simply local in its commencement, why should it so uniformly pass over the whole period of virility or active womanhood, during which the breasts and uterus are so frequently undergoing alternations of excitement and repose; and are certainly more liable to injuries from accidental causes than at any other time of life? And why should it thus occur so often in both sexes just at that time when those important constitutional changes are taking place, which mark the commencement of man's declining years? Surely these questions can be answered in no other way, than by referring the origin of the disease to those constitutional disturbances, or morbid alterations in the functions of some of the assimilating or excreting organs, which are so apt to occur at that period of life. And a minute history of each individual case will strongly confirm this inference. We say the *minute* history, because nothing is more defective than the common mode of examining this class of patients. For instance, a woman presents herself with a lump or sore in her breast: the surgeon first orders it uncovered, and proceeds to an examination of the diseased part. And he not only inquires, with much care, in regard to the length of time it has existed, the kind of pain felt, &c., but he brings to his aid the test glass of the chemist, and the microscope of the naturalist. In a word, he omits nothing which will aid him in determining the character of the local disease; the all-absorbing question being, whether the disease is malignant or non-malignant, cancer or not? This point decided, the surgeon, as if from mere habit, puts the question, "Is your health good except the breast?" And the patient, whose anxieties have all centred on that one point perhaps for months, very naturally answers "Yes;" and here the examination ends.

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* See Elements of General Pathology, by A. Stillé. Philadelphia: Lindsay & Blackiston, 1848.

It was only yesterday that I was consulted by a lady, 47 years of age, large size and somewhat corpulent, the mother of several children, and of active, industrious habits. The breasts were large, and in the left one was a tumor, presenting a lobulated, irregular feel, a retraction of the nipple, a puckered state of the skin just below the nipple, and giving rise to sharp, lancinating pains. The tumor occupied the central and lower part of the gland, and seemed to implicate about one third of its entire substance. Only two months had elapsed since it first attracted the patient's attention. Here is a case of well-marked scirrhous tumor, of recent origin, without any apparent *Carcer Cachexia,* and with what the patient herself calls "very good general health." But on examining more closely, I find that her uterine functions have been irregular, the menstrual fluid paler than natural, much pain in the back and loins, unusual sensitiveness to cold, some torpor of the bowels, appetite good and freely indulged, frequent headache, tongue moist and covered with a yellow fur, pulse small, 80 per minute, skin rather dry, urine not as free as natural, ————, conjunctiva, quite yellow, with much inclination to sleep. All these symptoms had continued, in a more or less marked degree, for several months before any difficulty was discovered in the breast. Yet, in reply to the question, "Is your general health good?" she promptly answered, "Yes, very good." And the case may be taken as a very *fair* specimen of what some would consider a strictly local cancer, there being no appearance of cancerous deposite in any of the neighboring glands,—indeed, the case had been examined, and pronounced of local origin, and a very confident assurance given that a *permanent* cure would be effected by extirpation.

It is true, that the case presents as few constitutional symptoms, or signs of functional derangement, as any that I have ever examined; and still, it seems to me that no careful observer can fail to find abundant proof that the disease is not local merely. Hence, in those cases which have been reported, in which the general health is stated to be *good,* without entering into any detailed account of the condition of the different organs and their functions, we may very reasonably doubt the minuteness and accuracy of the observer's examination; while, without such minuteness and care, it is plain that the case must be valueless, so far as the question now under consideration is concerned.

But if the acknowledged hereditary origin of tubercle and cancer, the analogy of other heterologous formations, and the minute history of all other cases, alike lead us to the conclusion, that these varieties of disease are owing to primary functional and constitutional disturbance, we shall find the results of operations performed for their removal, still more striking and conclusive. Thus, Dr. Alexander Munro mentions sixty cases extirpated under his observation, only four of which remained free from the disease at the end of two years.

In 1770, Mr. Hill published 88 cases of extirpation, 40 of which were alive and sound, in whom the operation had been performed more than two years. Boyer states, that out of 100 cases of cancerous breasts extirpated, only four or five remained permanently cured. Home describes 17 cases, five only of which proved successful. And in the April No. of the Amer. Jour. Med. Sciences, Dr. U. Parsons relates 16 cases of mammary scirrous, occurring in his own practice, of which the disease re-appeared in 9; and, of the remaining 7, one died of colic in three years, one of pneumonia suddenly in about one year, one of tubercular consumption in five years, and less than two years have elapsed since the last two were operated on. This leaves only *two* out of the 16 alive and free from the disease at the end of five years from the period of their extirpation. Thus, if we leave out Mr. Hill's cases, we shall have only 16 patients living and free from disease, at the end of five years, out of near 200 operated on. And even how many of these finally died of the disease, either internallyor externally, it is impossible to ascertain. It is true that Mr. Hill reports a very large proportion of patients cured, and so does Mr. Nooth, Mr. Fearon, and some others. But their statements are rendered almost entirely valueless, from the short time which is allowed to elapse between the performance of the operation and the date of the reports. Indeed, a very large majority of the cases reported as cured in our medical periodicals, are made within a few weeks or months after the operation; or if at a later period, they give us no information in regard to how long they remained cured. Thus Mr. Hill, whose report has perhaps done more to encourage operations than that of any other man, says, "that out of the first 45 cases, one only proved unsuccessful; in three more the cancer broke out again in different parts; and in a fifth, there were threatenings of some tumors at a distance from the original disease. These tumors, however, did not appear till three years after the operation, and the woman was carried off by a fever before they had made any progress. All the rest continued well as long as they lived." One, he states, lived over thirty years, and 15 were living at the date of his report; the last of whom were operated on 11 years previous. Now although this appears like a very flattering statement, yet when we look at it more closely, it amounts to simply this, viz.: out of 45 cases, one never healed; four returned externally; 24 died within 11 years, but whether of internal cancerous deposits and irritation, or of other diseases, we are left wholly in the dark, and the remaining 16 lived beyond 11 years apparently free from disease. Hence, instead of being permanently successful in 6 cases out of 17 as claimed by Mr. Hill, we can safely put down as such only 1 out of 3. And even this is far greater success than has been obtained by other surgeons. Thus Dr. Parsons, in a Boylston Prize Essay, published some dozen years ago, states as the result of his extensive inquiries, that in this country relapses occurred in at least two thirds of the cases operated on. And in his recent table of statistics to which we have referred, he says he ought to have stated it at "*more than three-fourths.*" Sir Astley Cooper, also, estimates the failures of entire cure at three fourths. In a report made to the Royal Academy of Sciences, Paris, in 1844, there was included 277 operations for cancerous tumors of the breast; of which 73 had been performed within two years, and consequently could not be taken into the account. Of the remaining 204, twenty-four had died, and 87 others had already relapsed; and yet 27 of these cases were operated on in less than one year after the first appearance of the disease. Until very recently, two causes have served to delude the professional mind on the subject. The first we have already alluded to, viz.: the habit of reporting all cases as cured which did not re-appear externally within 12 or 18 months after extirpation; and the second arose from the entire want of attention to the causes of death, where this took place in from 1 to 10 years after the operation. Whereas, more recent investigations have clearly demonstrated, that in a large majority of these latter cases, the death has really been caused by a continuance of the cancerous disease, its location only being changed from the external part to some internal organ, as the liver, spleen, lungs stomach, &c. So true is this, that all the more recent writers who have bestowed much attention on the subject, agree with Dr. Walter Hayle Walshe of London, when he says, in his recent and very valuable treatise on the "Nature and Treatment of Cancer," that "individual predisposition, or, as he prefers to call it, CONSTITUTIONAL APTITUDE, must be esteemed a NECESSARY condition of the production of this disease." And further, that *excision*, so far from being generally successful, no matter how early it may be performed, "cannot be undertaken without imminent risk of placing the patient in a worse condition than he or she was previously to the use of the knife." This latter position is so strikingly confirmed by the exceedingly valuable statistics presented by M. Le Roy d'Etiolles to the French Academy, in 1843, that we shall close this branch of our inquiry by a statement of a part of them. Thus out of 1172 patients with cancer not operated on, 18 lived more than 30 years after the first appearance of the disease, 34 lived from 20 to 30 years, and 228 lived from 6 to 20 years; while out of 801 operated on, only 4 lived over 30 years, 14 between 20 and 30, and 88 from 6 to 20 years.

(*To be continued.*)

ART. IX.—EXTRACTS FROM THE MINUTES OF THE LYCEUM OF NATURAL HISTORY.

June 21*st*, 1847.

Mr. Redfield made some remarks concerning the drift on the west end of Long Island, and stated that, among the fragments of shells, he had obtained a very fine cast of Venus Mercenaria, found at the depth of 25 feet below the surface; a specimen of Solerurtus Carribæus, filled with comminuted lime and quartz; part of a cast of Mya Arenaria, and a mass of Ostrea Virginica, Buccinum Obsoletum, and fragments of other shells. There was some difficulty in determining what belonged really to the drift, on account of the rubbish in the immediate vicinity, but that by a careful and minute examination, the boundaries between these two deposites, the one natural and the other accidental, could be accurately determined. Mr. Hodge made some remarks on similar deposites in the State of Maine: the fossils, as on Long Island, always occur below the drift, in large quantities, and well preserved; occasionally the bark of the birch tree and the common rock-weed are found associated with the shells.

Mr. Squier gave an account of the ancient mounds of the West, particularly those of Ohio. In the course of his investigations, he had examined more than two hundred, but could procure only one perfect human cranium. It appears that but one body was ever buried in each mound. He accounted for the numerous bones found in them, from the use made of them by succeeding tribes as convenient burial-places,—these latter bones being found but a few feet from the surface, whilst the more ancient bones, and those originally deposited there, were invariably found carefully placed deep in the tumulus, and usually with a plate of mica on the head. The mounds, he remarked, were of two kinds, some being used for sepulchres and others probably for altars. The mounds used for religious purposes were stratified, and appeared to have been formed by regular depositions of the material in such portions as a man could readily carry. A flat stone on the top of the mound, but always covered with earth, he considered as the altar; on it, among a material having a carbonaceous appearance, were found rudely-sculptured images of various animals, formed of porphyry similar to that found at Lake Superior, together with fossil teeth and ornaments made of them; marine shells, identical with some found on the shores of the Gulf of Mexico, strings of irregularly shaped pearls, sharks' teeth, knives of obsidian, copper rings and copper in a variety of forms, some silver ornaments resembling those worn by the Mexicans before the conquest of their country by the Spaniards; and in one, fifty pounds of galena. As to the age of these mounds, he offered no conjecture: on one of them was a large tree which, when felled for the purpose of determining its age, showed 580 concentric rings; the mound must, of course, have been much older.

July 26th.

Dr. Roemer exhibited two maps of Texas, and made some observations on the geology of the western portion of the country situated on the Guadaloupe river. The formation belongs to the cretaceous group, and the fossils correspond with those of the same formation in the south of Europe. The river has its rise in a granitic region; farther to the south, the granite gives place to transition limestone, very rich in trilobites, then to carboniferous limestone, characterized by the products which it contains; still farther to the north, the cretaceous formation again occurs. No tertiary rocks were found except on the Brasos river, near the falls.

August 30th.

Dr. Roemer made some observations on the cretaceous formation of New Jersey. This, he stated, is of the upper formation: the green and is sometimes overlaid by a calcareous deposit like that at Maestricht. The fossils are identical in many instances. At Timber Creek the remains of the morosaurus are found. It is remarkable that bones and other fossil remains should be the same in two places so far removed from each other.

November 8th.

Professor Agassiz, in some remarks on the fossil fish of the United States, observed, that from an examination of specimens from different localities, several new species had been obtained. There was, however, a marked difference between them and the fish found in similar formations in Europe. On the eastern continent, cartilaginous fish are the prevailing type; in America, the osseous are the most numerous. In European fossil fish, the tail is symmetrical; in the American, oblique and unsymmetrical; and the vertebral column, instead of terminating at the separation of the lobes of the tail, extends through the centre of the upper lobe nearly to its termination. He considered the fossil fish from Virginia more recent than those from New Jersey and Connecticut.

November 29th.

Major Le Conte read a note from Dr. James E. Dekay, in which he wished to correct some inadvertencies and misnomers which occur in his Natural History of the Crustacea of New York.

The Gonodactylus setemanus in the cabinet of the Lyceum, has been determined by Dr. Gibbes, of Charleston, S. C., to be the Callianassa major of Jay. In the description of Xantho mercenaria, there is a clerical error in the character of the genus: "a hiatus below the external orbit," should be, *no hiatus below*, &c. Jesarma cinerea is distinct from S. reticulata; Plagiusa Sayi is probably S. squarrosa of the East Indies; Ilia punctata is the Guaia punctata of Milne Edwards.

December 20th.

Professor Loomis gave a very interesting and detailed account of a satisfactory series of observations to ascertain the difference of longitude between Jersey City, Philadelphia, and the City of Washington, by means of the magnetic telegraph, so rigorously conducted so as to leave no fear of as great an error as one tenth of a second.

January 10th, 1848.

Mr. Colby made some remarks on the lead mine at Eaton, New Hampshire. This mine was discovered about twenty years ago, worked for a short time, and then abandoned. Last year the work was again undertaken; the vein which runs north and south is six feet wide, and has been worked to the depth of forty feet. Below the depth of twelve feet it is intersected by cross veins rich in silver, yielding as much as eight pounds of silver to the ton of lead. At the depth of twenty feet, a mass of pure lead ore, from five to six feet in thickness, was obtained. Accompanying the vein of lead is one of zinc, generally eight feet in thickness, and composed chiefly of yellow blende. This last ore has been melted with copper, and produces a superior brass. Mr. Hodge gave an account of a bed of sand found in Berkshire county, Massachusetts. This bed was discovered last year; it is of great extent, and of the most perfect purity, and conveniently situated for furnishing large supplies at a small cost. The locality of this important material for glass works, is in Lanesborough, about five miles northeast from Pittsfield, and within half a mile of the North Adams railroad. The existence of quartz sand in this region has been long known, but none has before been discovered so entirely free from all foreign matter. Its source is in the quartz rocks of Berkshire valley, a rock familiar to all geologists, known as a continuation of the Potsdam sandstone, greatly modified here, by its vicinity to the igneus rock formation of the Hoosack hills. It forms, throughout its range in Connecticut, across the State of Massachusetts, and along Vermont as far as Burlington, to the north mountain ridges of the most compact quartz, a stone of great hardness and durability. It assumes a portion of mica, and becomes more granular in its character. and then forms the valuable hearth-stone used in the blast furnaces of the country. It disintegrates and crumbles into sand, and the product is the most beautiful material for the manufacture of glass that has ever been used. The locality whence it has as yet been obtained, is one of these north and south ridges: at one point in it the rock, which in most other places is found in projecting ledges of the most refractory character, is here in a soft and crumbly state.

The strata lie nearly vertical, and are easily broken up by the pick. Very thin seams of talcose slate and of clay separate the layers of quartz, so that, after quarrying, the sand is washed in order to remove these, the only impurities. The stone is so perfectly disintegrated, that a lump of it, when taken out and dried, soon loses its form, and crumbles into fine sand; it is impossible to keep it in a mass when dry.

The outcrop of the bed is close to the surface, and clean and white samples have been dug up at the depth of only two feet. It is now uncovered over an area of perhaps a hundred feet by fifiy, and has been worked about fifteen feet deep, presenting a quarry of dazzling whiteness, in the midst of the dark evergreens by its side. The whole extent of the bed is at least five hundred feet, and may extend much farther.

The supply of this sand may be considered inexhaustible; for, unless the stone becomes hard, there is no limit to its depth, and none is yet known to the length of the disintegrated portion.

The composition of the sand is pure silica, and it is considered, so far as it can be learned, a superior article to any that has been received at the glass works. On examining it with a powerful lens, the grains lose their whiteness, and appear like the clearest crystals of quartz, perfectly transparent. It is an excellent article for plate glass, and it is to be hoped that the manufacture of this may soon be introduced into our country. Samples sent to Liverpool have been analyzed in England; the result, according to the certificate of the chemist, is, that it is pronounced superior to the best sand hitherto supplied to the glass works there. The business of exportation has now commenced, both to Liverpool and Havre.

The bed was discovered by Samuel Smith, of Massachusetts, and through his enterprise, this new branch of business has been brought to light, and every preparation made for its extension during the coming year.

January 31*st.*

Dr. Le Conte made a report on the fossil horse teeth, in the museum of the Society. He had detected five different species among them.

From Europe:

1. *Equus caballus*, Lin. A very perfectly preserved, superior molar, from Tuscany, scarcely differs from recent specimens: the diameters of the tooth are equal, but the margins of the crescentic islands of enamel, which look towards each other, are more plicated than in other specimens.

II. *Equus* (*asinus*) *Oloeni.* L. C. The *asinus fossilis* of Oloeni (British Fossil Man., p. 396. As the genus asinus is not admitted by systematic naturalists, it has become necessary to change the name of this species, as there is already an Equus fossilis described by Von Meyer. The present species is, therefore, named after the distinguished palontologist, to whom we are indebted for its discovery. Our specimens were received from Tuscany.

From America:

III. *Equus curvidens*, Owen. To this species, as recognised by Dr. Leidy, belong two superior molars from Monmouth county, New Jersey. The anterior molar is straight. On a comparison with the same tooth of E. caballus, this striking difference may be observed: the anterior part of the anterior crescent points inwards, instead of forwards, and is directed to a sharp angle in the surrounding enamel. In E. caballus no such angle is found. The posterior molar from the same locality is very much curved, and has, as Dr. Leidy observes, no trace of an island or lobe of enamel at the posterior part.

To the same species belong a superior and an inferior molar from Big Bone Lick; the enamel folds are more plicated than in E. caballus, and the internal fifth prism has the posterior angle more produced. The inferior molar is much more compressed than in the living species, and has a greater lateral curvature; the medial external fold of enamel also penetrates deeper than in E. caballus.

IV. *Equus Americanus*, Leidy. Pro. Ac. Nat. Hist. Phil. vol. 3, p. 265. A fragment of a posterior upper molar from Big Bone Lick, presenting the plicated enamel folds, and the small detached posterior island characteristic of this species.

V. *Equus brevidens*, L. C. n. s. There are two superior and one inferior molar of this new and undescribed species from Big Bone Lick. The superior molars are straight and but little worn, so that in one of them, the different parts of the crescents are scarcely connected. Notwithstanding they are much shorter than corresponding teeth of E. caballus, the enamel folds are very much plicated. But the best character is drawn from the excess of the lateral over the centero-posterior diameter. In all other fossil species, there is a tendency to a lateral compression, but in this the compression is in an opposite direction.

The inferior molar has the anterior and posterior margin destroyed; it appears to have been similar in shape to that of the E. caballus, but is much shorter, the external fold of enamel is much deeper, and is not bifurcated; the internal valley is shallower, the curvature scarcely perceptible. Mr. Seram made the following observations on the Onondago salt group.

The Onondago salt group holds a prominent position in the silurian system, as unfolded in Onondago county, New York. In Montgomery county, this group appears directly over the Clinton group, by the intervention of the Niagara group, upon which it rests; it then passes through this state into Canada.

The thickness in Onondago county is about 800 feet. The Erie Canal is excavated in this rock through Madison, Onondago, Cayuga and Wayne counties. From its decomposition is formed the soil throughout its course, for an average width of about eight miles, forming, perhaps, the richest wheat-producing district in the State.

The members of this group, beginning at the lower ones, are:

I. A fissile shale of a blood-red color, varying in thickness from 100 to 500 feet in depth, and permeable to water.

II. A red and green shale of less thickness, containing the lower tier of plaster beds in its upper portions.

III. The lower tier of plaster beds, consisting of immense masses of gypsum of a conical form, and arranged very nearly horizontally.

IV. Funnel-shaped cavities, supposed to have once been filled with fossil salt, but which are now filled with carbonate of lime and clay, the depositions of the percolation of water from the rocks above.

V. A limestone rock of uniform thickness, with numerous pores passing in a perpendicular direction. The decomposed material of the pores has been replaced by percolations from the rocks above.

VI. Above the last-mentioned rock, which by Mr. Eaton was named vermicular lime rock, is the upper tier of gypsum or plaster beds, resembling in character and arrangement the lower beds.

VII. The magnesian lime rock, with needle-shaped cavities passing in a horizontal direction.

Salt water of 71 per cent. strength, is reached at a point somewhat below the lower members of this group, in a deposit of sand.

Onondago lake is underlaid by a bed of marl of limited lateral extent, and of a mean thickness of six feet imposed upon this deposit of sand. Surface water percolating through the upper groups and the upper members of this group, upon reaching the fossil salt, dissolves it; and this solution passing through the lower members of the group, and on the outside of the marl, finds a resting place in the above mentioned deposit of sand.

An analysis of the salt water, 35 gallons of which contain one bushel of salt, exhibits a considerable proportion of sulphate of lime. In the evaporation of the water, it has been observed, that the first deposit was iron mixed with sulphate of lime; the second, sulphate of lime without iron; and last, the salt. From this it appears that the iron is the least soluble substance in the compound, and is the most easily separated from it.

This fact may go far to account for the red color of the shales through which the salt water passes, particularly those which are the lowest. It is not impossible that chemical affinities may have facilitated the separation of the iron from the water, in its passage through the shale; but it is undoubtedly true, that the shales abstracted their color from the water in its passage, until they reached the point of saturation; afterwards the iron passed on with the water. Mr. Redfield called the attention of the Society to a recent fault in the rocks of this island, on 33d street near the North River: the rock, which presents a large surface, shows a displacement of two inches, which must have happened after the surface of the rock had acquired its present form.

March 13.

Dr. Gibbs directed the attention of the Society to the analogy between the laws which govern the formation of doublets in the organic and inorganic world. When, for instance, monsters are formed by the union of two individuals, their union is almost always effected between similar parts. This is precisely what happens in the union of crystals. Two crystals always unite by similar or symmetrically-situated planes.

Dr. W. L. Jones read a description of a new species of Woodpecker from Georgia.

Picus Le Contii. Above, variegated with black and white; anterior part of the neck, sides and breast pale cenereous-brown; a broad red band on the occiput, and a large dirty white spot in the suprascapular region; chin and belly whitish. Bill compressed: feet 3-toed.

March 20.

Mr. Hodge made some remarks on the lead mines of the United States. He stated that in the lead of the Western States, no appreciable amount of silver can be detected; and in many instances the bed of ore is discovered by following the line of bushes, which grow in the deep soil of the fissures in the rock. The solid veins which occur in the limestone are worked by blasting. The vein sometimes opens into a cavity which is often extremely rich. The ores of Missouri, Illinois and Wisconsin, are the same, although found in different strata, but all are below the coal formation. The argentiferous galenas are found from New England to Carolina. The first silver obtained from lead ore and taken to the mint, was from King's mine, North Carolina, since called the Washington mine. The richest ore is from Rhode Island, and contains thirteen pounds of silver in the ton of ore. The galena from Andover is remarkable as being mixed with iron.

March 27.

Mr. Chase, U. S. consul at the Cape of Good Hope, made some observations on a Bushman boy, aged 19 years, who accompanied him.

This boy was brought to the Cape by some traders from the interior, who found him lying senseless, in a place where a number of Bushmen had been murdered by a band of Kafirs. Signs of life being perceived in the child, he was taken up and restored to the exercise of his faculties; he had been in Mr. Chase's possession four years: he could speak English, but had lost the knowledge of his native language. In mind and manners, he did not differ from a child of five or six years of age, yet there was nothing idiotic in them, nor in his appearance.

The only information we have of this race of men is from the traders who pass through their country, in going to the interior; the distance from the European settlements must be very great, as these traders are frequently absent for two or three years. From these accounts, it appears that they number about 5000 individuals, and rove naked over the plains, have no dwellings and no government, live upon any animal or vegetable food which they can obtain, but chiefly on a species of antelope that abounds in the region which they inhabit. Their only weapons are rude bows and arrows. They are frequently hunted like wild beasts, both by the Kafirs and the Dutch boors, and killed without mercy, in revenge for the cattle which they had stolen, or which had been made away with by them, when found straying beyond the bounds of the settlements.

These people average 4 feet 4 inches in height, and possess more intellect than is usually ascribed to them. Their sight is very good. On the voyage from Africa to Europe, this boy could distinguish vessels long before they were visible to any one else on board the ship. His hair is closely curled in small locks, or rather knots, and each hair is more or less flattened. This is the third one that has been brought from Africa; the other two are in Europe.

PART SECOND.

Critical Analysis.

Art. X.—*The Human Brain; its Structure, Physiology and Diseases, with a Description of the Typical forms of Brain in the Animal Kingdom.* By Samuel Solly, F. R. S., etc. From the 2d London edition, with 118 Wood Engravings.—Philadelphia: Lea & Blanchard, 1848, 8vo. pp. 496.

On Disorders of the Cerebral Circulation and of the Connection between Affections of the Brain and Diseases of the Heart. By George Burrows, M. D., etc., with Colored Plates. Philadelphia: Lea & Blanchard, 1848, 8vo. p. 216.

There is no subject connected with our science which possesses so much intrinsic interest and importance, as the structure and functions of the human brain; and yet, as Mr. Solly well observes, acccording to the plan usually pursued in describing this organ, by lectures and systematic works of anatomy, the information conveyed amounts to little more than a vain catalogue of names applied to parts, without reference to their structure, their functions, or even their analogies in the nervous system of the lower orders of animals.

> " Such a barren prospect," says Mr. Solly, " as a list of names, holds out but little to attract the most zealous among students; while the dryness of unconnected detail, and the obstacles to clear conceptions engendered by the absence of every thing like arrangement, almost certainly deter him from attempting to learn more than is required to prepare him for the diploma. It is unfortunate, indeed, that candidates for this honorable certificate are still very generally required to describe the appearance as presented by the brain dissected, or rather as strayed, by the old method of slicing; a method most unphilosophical in its conception, and totally inadequate to impart any real information in regard to the structure of the organ. And I do not hesitate to affirm, that this mode of examination has contributed essentially to retard the diffusion of sound knowledge in regard to the anatomy and physiology of the most important system in the body."

To Gall alone belongs the credit of teaching how to separate the fibres of the brain without cutting them; and though his mode of studying this organ possesses so many and so great advantages over that of slicing, it is still but little practised by teachers of anatomy. If we desire to simplify and give a character of general interest to the anatomy of the human brain, the true method would be, to commence with the structure and functions of a nervous system in the lowest and simplest forms of animal existence, rising by degrees to the highest; carefully observing each addition of parts, and the relation which is borne by these to an addition of function. In this way we learn, that this organ in man is but a gradual development from an extremely simple fundamental type on one uniform and harmonious plan, and that the apparent complexity of the cerebro-spinal axis in man really arises from the great concentration, as opposed to the great diffusion of its component parts in the lower order of animals; for in no particular are the higher orders more strikingly distinguished from the lower than in the concentration of function within circumscribed limits.

The first part of Mr. Solly's work is taken up with a description of the *Structural Anatomy of the Brain;* in which we have a full account of the microscopic appearances observed in this organ, as given by Ehrenberg and others. Part II. is occupied with its *Comparative Anatomy*, through the five great Divisions of the Animal Kingdom, viz.: 1. *The Acrita;* 2. *Radiata;* 3. *Articulata;* 4. *Mollusca;* 5. *Vertebrata.* This portion is admirably sketched, and leaves nothing unsaid which can throw the least light upon the subject. Part III. is devoted to a consideration of the "*Protective Apparatus of the Human Brain,*" under three Heads: 1. *The Osseous or Bony;* 2. *The Membranous;* 3. *The Aqueous Afliva.* In Part IV. the *Weight of the Brain* is considered. Part V. *Configuration of the Encephalon.* Part VI. *Dissection of the Human Brain and Spinal Cord.* At the end of this Part, Mr. Solly remarks as follows:—

> "In conclusion, let me express the hope that these views or analyses of the component parts of the encephalon will really simplify the whole of its anatomy, and materially assist the student in acquiring a knowledge of its true character. I wish that custom did not require the student to burden his memory with fanciful and unmeaning names, and that instead of learning a long catalogue of the contents of the lateral ventricles, as they are erroneously designated, and puzzling himself with the abused titles of *Hippocampus, major and minor, Prohippocampi, Cornui Ammonis,* &c., he would be required simply to observe how the spinal columns appear to terminate superiorly in two large tubercles, the *corpora striata*, and *thalami*, from the sides and under parts of which the hemispheres spring out, being afterwards reflected so as completely to envelop this bulbous extremity of the spinal cord. In the same way the third ventricle should be described as a fissure separating the two halves of the brain, his particular attention being directed to the commissures which pass across it to connect the different cerebral ganglia with one another. The description of the relative position of these ganglia, the commissures connecting them, and their relation to the ganglia and columns of the spinal cord, comprehend all the information which is either interesting or useful to the student."

In Part VII. we have a full description of the *Cerebral Nerves.* Part VIII. treats of the *vessels employed in the Cerebral Circulation.*

The chapter on the *Development of the Brain*, is one of the most interesting in the whole work. The author thinks that the vast mass of facts which have been accumulated for its elucidation, are amongst the most satisfactory and conclusive in proof of the existence of general laws instituted by an Almighty power, and in conformity with which every organ in the animal series is found to be framed on one beautifully simple and harmonious plan; and that it is only by the discovery of the general laws which regulate the phenomena of vitality, that we can ever expect to raise the study of Physiology to its legitimate rank among the natural sciences. The gradual development of the brain and spinal cord on one simple and uniform type, is a beautiful illustration of the principle, for we find that the complied structure which we meet with in the human adult, is at an early period of fœtal existence as simple in its general arrangement as many of the permanent forms of the lower vertebræ in animals, and that in its development Nature appears to have pursued the same plan which she has adopted in the organization of each individual in her vast family, gradually adding one part after another, and at the same time concentrating the whole, each fresh addition changing the appearance of the several parts ; so that unless the chain be observed from its very commencement, the analogies which are so palpable when we proceed step by step, are obscured, and even made altogether incapable of demonstration.

We have perused Part X., relating to the *Physiology of the Cerebro-Spinal Axis*, with peculiar satisfaction. Knowing that the author was formerly somewhat opposed to the principles of phrenology, we were not aware of his entire change of opinion on this subject, as evinced in the present chapter, until we took it up ; and it certainly ought to teach those a little more modesty, who are in the habit of ridiculing doctrines sustained by such men as the author of this elaborate work ; not that any man should bend implicitly to the authority of great names ; but that great names should teach us to question our own judgments, and examine our opinions with peculiar care, in points wherein we may differ from them. The sources of our information on the functions of the nervous system are fourfold: 1st. Comparative Anatomy, that is, observation of the parts composing it in the lower animals, and the relation which they bear to those of man, considered in connection with the development of their organs of sense and muscular action.

2dly. Experiments on living animals.

3dly. Pathological traits.

4thly. Observations between the relations of the size of the human cranium in individuals, and their manifestations of intellect.

With respect to the best source, as affording us knowledge of the functions of the brain, Mr. Solly remarks as follows :

> " The mass of evidence in favor of the belief that the great hemispherical ganglion, or cervical substance of the brain, is the immediate agent in all mental operations, is, in my own opinion, so conclusive, that it becomes next a most interesting question whether different portions of this ganglion play different parts in the production of mental phenomena. Now I candidly avow, that the more I have examined the facts adduced by the supporters of this theory, the more I am inclined to believe that its *general principles* are correct and philosophical. I entirely agree with that talented observer, Mr. George Combe, that " Phrenology, in its evidence, rests on the same foundation as the practice of medicine. The existence of disease cannot in general be determined by weight or measure, and the characters of diseases can be judged only by their appearances, or the symptoms which they present. The organs affected—the degree to which they are affected—and the extent to which medicines act on them—are all estimated by the exercise of observation and reflection as mere symptoms. In the practice of medicine, anatomy, physiology and pathology shed their light to help the judgment in its estimates, but they do not reveal the theory of medicine *a priori*, nor do they render it a demonstrative science. The same general laws of evidence must necessarily apply to the stndy of phrenology. The mental manifestations are not ponderable nor measurable any more than the capacity for pain or pleasure, or the powers of hearing or sight are so. We estimate the degree in which these susceptibilities and capacities are pos-

sessed by different individuals, and regard our knowledge as substantial, and we must of necessity learn to estimate the force of the mental manifestations by a similar exercise of observation and reflection, or remain forever ignorant of mental science."

Mr. S., in the course of his observations on the composition and properties of *neurine*, and on the essential elements of a nervous system, establishes the following fundamental principles:

"1. That vesicular *neurine** is the source of power.

"2. That medullary neurine is the conductor of it.

"3. That medullary neurine is also the conductor of those impressions which call forth the power of the vesicular neurine.

"4. That the vesicular neurine is collected in masses of variable forms and size—the ganglia.

"5. That the medullary neurine is moulded into cords and bands,—the nerves and commissures."

With respect to the functions of the nerves, Mr. S. states, that besides those of sensation and motion, there is another system for the involuntary—the conservative movements of the body—the excito-motory system of Marshall Hall.

> "The spinal nerves," he observes, "are connected with the spinal cord by anterior and posterior roots: each root consists of two sets of nerves, making, therefore, four sets of spinal nerves functionally distinct. The two anterior are the conductors of volition from the brain to the voluntary muscles, and the conductors of a stimulus to muscular action, independent of volition from the ganglia of the spinal cord, the efficient nerves of spinal power. The posterior roots are also bivary in their functional power—nerves of sensation, conducting impressions to the brain, and recognised by the conscious being; and conductors of impressions to the spinal ganglia from parts requiring the protective action of muscles too important to be left to the control of mind—the incident nerves of spinal impressibility."

It is too late in the day, therefore, according to our author, to speculate as to the existence of an *excito-motor* system of nerves, since they are capable of demonstration by the scalpel of the anatomist, as shown by Grainger, Carpenter, and Newport.

The *spinal cord*, according to Mr. S., is a series of ganglionic centres, structurally homologous and functionally analagous to the jointed ganglionic cord of the articulata, as functionally distinct as the auditory, optic, and olfactory ganglia of the brain; made up of ganglia, nerves, transverse and longitudinal commissures.

The *medulla oblongata* consists of three ganglia on each side of the mesial line, the *olivary* bodies, or lingual ganglia, the *restiform*, or pneumogastric ganglia, and the *posterior pyramidal* bodies, or auditory ganglia.

The *pons varolii*, though evidently a great transverse commissure, must also be an instrument of power, through the medium of its vesicular neurine; holding some relation to transmission of motor and sensory impressions by the tracts which in the spinal cord conduct them.

The *cerebellem* must perform some very important office in the animal economy, as its ganglionic portion consists of an extensive surface of vesicular neurine, being in fact a ganglion, or series of ganglia, of great power. We should infer this, also, from its extensive nervous and commissural connections, its motor and sensory tracts, forming the *restiform* bodies, and plunging through the substance of its great transverse commissure, and connected also with its nucleated vesicle. The cerebullum is also intimately associated, through the intercerebral commissure, with the optic, the anterior cerebral and posterior cerebral, and the hemispherical ganglia.

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* The essential material of the nervous system is called *neurine*—it is that substance in which the peculiar powers of the brain and nerves reside. It is never found by itself, for it is too delicate in texture to retain its properties if it were unsupported; hence, it is always supported and protected by the membranous fibre, arranged in various ways. Indeed, membranous matter forms the basis of each organ, in the interstices of which the peculiar material of the organ is deposited.

The *function* of this portion of the encephalon, according to Mr. S., is to regulate and co-ordinate muscular action on one part, most probably by means of its central portion, viz: the superior and inferior vermiform processes; and secondly, it holds some relation to the generative functions, as proved by Drs. Gall, Vimont and Broussais.

The *locus niger* in the *crus cerebri*, is, according to Mr. S., the seat of the excito-motor power of the third pair of nerves.

The *tubercula quadrigeminæ*, or optic tubercles, are the instruments by which the physical impressions of light received by the retina are converted into sensations of light, color, form, &c. The *optic thalamus* is the essential ganglion of the *sensory* tract, while the *corpus striatum* is of that of the *motor* tract. These anterior and posterior cerebral ganglia are undoubtedly independent centres of action, forming part of the series of sensorial centres, as shown by Dr. Carpenter, and as we should infer from the large quantity of vesicular neurine they contain.

The cerebral lobes, or *hemispherical* ganglia, are demonstrably the instruments of the mind—that portion of the brain in which sensations are converted into perceptions, and give rise to ideas—comparative anatomy, developmental anatomy, experiments on living animals, observations on its size and form, as indicated by the size and form of the skull, and last, pathology—all afford a mass of overwhelming evidence that this portion of the brain, and this only, is the cerebral organ of intellectual power, and yet the hemispheres are insensible both to puncture and incisions. That part of the brain in which the sensations are converted into ideas, and the ideas hoarded up, to appear again, as it were, as shadows of the sensations, is itself devoid of sensibility. After quoting with approbation from Mr. G. Combe on this part of his subject, Mr. S. refers to the proofs derived from pathology, which are briefly summed up thus:

> "If the effusion of blood take place on the surface of the brain, the mind is more or less disturbed; and if the effusion is extensive, the intellect is buried for ever; but if the effusion is limited to the medullary substance, the mind having recovered the first effect of the general shock, remains perfect, though its conducting instruments are paralyzed."

Mr. S. thinks that Gall deserves the thanks of mankind for his labors, as he was the first philosopher who attempted to prove that the brain is not a single organ, but a combination of organs:

> "The science which Gall advocated," says Mr. S., "is now well known under the title of Phrenology. Those who have not given their serious attention to this subject, have a sort of indefinite idea that phrenology is some occult science, by means of which its professors pretend to be able to judge of a man's character by an examination of the bumps upon his head. This is the

phrenology of the superficial and the idle, who, not having industry enough to investigate for themselves, set up a baseless shadow, and then take credit for the facility with which they overthrow it—*this is not the science of phrenology*, but the phantom of their own imagination. In the first place, the word bump, in reference to the surface of the skull, has no place in the vocabulary of the phrenologist. The practical phrenologist judges of character by space rather than by mere elevations or depressions. It must always be borne in mind, that the physiological principles upon which phrenology is founded, may be perfectly correct, and nevertheless its professors may make great mistakes in their application."

Again remarks Mr. S.:

"Those who really wish to understand phrenology, and judge of its correctness, ought to read the works of Gall, Spurzheim, Combe, and lastly, the admirable treatise of Mr. Noble.

"My reasons for believing that there must be a great deal of truth in phrenology are fourfold. First, I have received from practical phrenologists, and especially the late worthy Mr. Deville, such accurate characters of individuals known to me, but unknown to them, that I cannot believe the accounts I received could be the result of accident and conjecture, which must have been the case if phrenology is untrue.*

"2d. Phrenology alone--as it appears to me—can account for all the varieties of insanity, especially monomania.

"3d. The facts which have been collected by the late Mr. Deville, showing that the brain will alter its form at any period of life.

"4th. The existence of longitudinal commissures."

Mr. S. states, that in Mr. Deville's collection of casts, there are over 20 which prove an alteration in form; and so far as I can judge, they correspond with the mental and moral experience which the brain experienced in the period during which the changes were taking place.

"If phrenology is true," says Mr. S., "insanity on its first ingress is frequently not a disease of the whole brain, but only a part of it. The first effect of inflammation is to excite to an unnatural degree the natural function of an organ. The function of the organ thus exalted, obtains a mastery over the rest. For instance, a man, from defective education combined with hereditary tendency, allows his love of approbation, his vanity, in other words, to grow with his growth, and strengthen with his strength, gradually becoming the sole ruling principle of his life; at last, *it*, instead of reason, so completely guides and regulates all his actions, that they are contrary to reason, and justly called the acts of a lunatic. Yet all this may go on with reasoning faculties so acute that he conceals the dominant feeling of his breast, the main spring of all his actions; and in a court of law defies any one to prove him insane. The great amelioration which has been effected in the condition of the lunatic has been founded on this principle, that none are so mad as to be incapable of appreciating kindness. Throughout all the admirable and interesting reports of Dr. Conolly, it will be seen that this has been the guiding principle of his boldly humane treatment. The first thing, says this admirable man, is to gain the *confidence* of your patient, and that once obtained, you may do *anything* with him. (p. 267.)

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* The late Dr. CALEB TICKNOR, of this city, whose admirable qualities of both head and heart will ever live in the recollection of all who have made his acquaintance, and who was, moreover, a scientific and practical phrenologist, invited, on one occasion, about twenty of the leading clergy of this city to meet at a certain place in Broadway, for the purpose of testing the truth of phrenology, by submitting their heads to an examination by a distinguished phrenologist, who was entirely unacquainted with them, and of course with their individual peculiarities of character. We were fortunately present, and took copious notes of the examination, and we believe there was not a gentleman present who was not taken completely by surprise at the perfect and minute truthfulness of the description, as connected with the traits of character attributed to each. The description of the intellectual and moral traits of the Rev. Dr. S., Rev. C. C., and Dr. S., were so extremely graphic and true to nature, as to excite astonishment on the part of the gentlemen themselves, as well as those present. We believe that not a single gentleman, then present, has ever doubted, since witnessing that experiment, that there is *some truth* in phrenology.—Ed. Jour.

Mr. Solly thus speaks of the bearing of phrenology on the education of the young:

> "Mental philosophers have always admitted, that if a man through imperfect education has never had his reasoning faculties called forth, the instrument of that power becomes more or less atrophied, and the power is more or less lost. For instance: take two boys born of the same parents, and with the same or nearly the same original capacity; supposing them differently educated, the one brought up in the fields, and all mental culture neglected, the other trained for a learned profession. When these two have arrived at maturity, oblige them to change places, and the incapacity of the brain of the peasant would only be surpassed by incapacity of the muscular system of the student. The same applies to moral as to intellectual culture, and hence the same importance of early education, for the formation of moral strength, as for the formation of intellectual or muscular strength. But phrenology goes further than merely to insist on the importance of educating the child. It goes further, also, in tracing moral insanity to its real cause. It teaches us that the child inherits more or less of the mental or moral capacity of the parent, just as much as he inherits the form of the face and physical constitution; and as personal beauty may be more or less spoiled and effaced by evil education, (and I refer to the moral and mental education of circumstances and example,) so may the brain, with its mental and moral faculties, be deteriorated and debased by the same causes. But phrenology also inculcates that, although it has pleased the Almighty, for some good and wise purpose, to ordain that not merely the bodily diseases of parents, but even their mental and moral imperfections, shall, more or less, descend to their children; such hereditary imperfections, whether of the intellectual, the muscular, or the mental organs, may be corrected by careful attention."

Let these extracts suffice to show to what conclusions Mr. S. has arrived, after a life devoted almost exclusively to the study of the anatomy and functions of the brain: and if they are at variance with those entertained by some of our readers, let them serve as an incentive to a more diligent and closer investigation of the whole subject. Whether we adopt the views of Mr. S. or not, it is very evident that the flippancy of remark, of physicians and divines, towards phrenology and its advocates, is neither in good taste, nor evinces that liberality of sentiment, or extent of knowledge, which might be expected from men of cultivated intellects.

The last half of the work is devoted to the *Diseases of the Brain*, which are treated in the same masterly manner as the topics already noticed. We have only space to copy the following summary of general principles, for the treatment of all inflammatory affections of the brain:

> "1. There is no time to be lost; minutes even are of value.
>
> "2. That inflammation of the brain is a depressing disease, and that, as a general rule, general bloodletting is not often admissible.
>
> "3 That though general bloodletting may sometimes be attended with benefit at the time, the good derived from it is seldom permanent.
>
> "4. That local bloodletting, by leeches and cupping, is generally useful, and especially in cases of insomnolence arising from abnormal action of the brain.

"5. In cases of insanity, where opium has failed to produce sleep, leeches and cold applications frequently will; and if they do, it is strong evidence that the excitement arises from hyperæmia, and not from anæmia, as in that of delirium tremens.

"6. That aconite and digitalis are the best sedatives, especially when combined with mercury.

"7. When it is advisable to salivate rapidly, raise the cuticle by boiling water, or a similar escharotic, and dress the surface with strong mercurial ointment.

"8. Always commence the treatment with a brisk mercurial purgative.

"9. Soothe the patient's feelings in every way.

"10. Never leave anything that is disagreeable to the patient to be done by a nurse or attendant, such as the application of leeches, &c.; 'but persuade him to have them applied.'

"11. Never lose your patience in the treatment of a chronic case, or try to hasten the cure by increasing the doses.

"12. When it is considered necessary to continue the use of mercury for a lengthened period, combine tonics with it."

In conclusion, we earnestly recommend all our readers to procure this work of Mr. Solly's, as being far in advance of anything hitherto published on the brain, its anatomy, physiology, and diseases. It is issued in the same splendid style in which the enterprising publishers, Messrs. Lea & Blanchard, bring out all their medical publications, viz., fair, clear type, white paper, and beautifully-executed wood cuts,—altogether furnishing inducements to purchasers which few can, and none ought to resist.

The work of Dr. Burrows on *Disorders of the Circulation*, &c., is well known to many of our readers, through the columns of the *London Medical Gazette*, (1843.) It embraces a series of physiological, pathological, and practical essays, of the very highest value to the practitioner, besides endeavoring to establish more correct ideas upon the peculiarities of the circulation within the cranium; upon the effects of alternations of muscular pressure within that cavity on the functions of the brain; and upon the proximate cause of apoplexy and other comatose affections, the author adduces numerous facts, also, to show how far the affections of one important organ may depend upon disease going on, perhaps insidiously and unsuspected, in another. Dr. B. has pointed out with great force and perspicuity, how structural changes in one organ will first produce disturbed functions, and ultimately lesions of structure in the other; and he has especially illustrated this principle by proving the frequent connection between affections of the brain and structural diseases of the heart. His observations on the treatment of apoplexy and hemiplegia, as well as upon the treatment of acute affections of the heart, accompanied with symptoms of nervous irritation, are extremely judicious, and of great practical value, founded as they are on extensive experience and observation.

ART. XI.—*Etherization.—Littell's Living Age*—No. 201.—18th March, 1848.

We have been favored with a copy of the above periodical for March, which is nearly wholly occupied with an article from the pen of R. H. Dana, Esq., vindicating the claims of W. T. G. Morton as the discoverer of etherization, as a mode of producing insensibility to pain. We have also received a voluminous Report of the Mass. General Hospital for the past year, which is also devoted to the defence of Mr. Morton as the sole discoverer of the anaesthetic agents. All this betokens a determination *somewhere*, and on the part of some individuals, to gain the victory by a grand *coup de main*; and if words could carry a point in the face of well known and established facts, then, undoubtedly, Dr. Morton would distance all competitors. It is not enough that the physicians of the Massachusetts General Hospital should combine in his defence; the case requires special pleading, and the law must be invoked; accordingly, the author of "Two Years before the Mast," takes his stand on the quarter deck, and tells us that, a "number of persons, satisfied of Dr. Morton's right to the title of discoverer, and desirous of having all the material facts, arguments and documents, collected and put into a single pamphlet in an orderly manner, and under some degree of personal responsibility, have requested me (him) to perform this duty. *I undertake it as a professional service, and I desire to have it so understood by the public.*" We understand it, Mr. Dana; you wish to say that you have been hired, as a lawyer, to make a special plea in behalf of Dr. Morton, and you do it just as you would have undertaken to make one in behalf of Dr. Jackson, if "a number of persons" had solicited your professional services in his behalf. We find no fault with Mr. Dana for so doing—not the least—he is in the way of his calling; we only mention the circumstance as something new under the sun, this employment of legal practitioners, in the absence of actual litigation, to argue a case like this, which is only to be decided by reference to facts.

In order to an understanding of the question at issue, it is necessary, says Mr. Dana, to direct our attention to two points: "1st, What was known on the subject before this discovery was made? 2d, What is the precise thing that makes this a discovery?" To arrive at a solution of the first question, Mr. D. quotes the following from the specification of Drs. Morton and Jackson, accompanying their *first* patent.

> "It has been known that the vapors of some, if not all, of these chemical distillations, particularly those of sulphuric ether, when breathed or introduced into the lungs of an animal, have produced a peculiar effect upon its nervous system, one which has been supposed to be analogous to what is usually termed intoxication. It has never, to our knowledge, been known until our discovery, that the inhalation of such vapors, particularly those of sulphuric ether, would produce insensibility to pain, or such a state of quiet of nervous action, as to render a person or animal incapable to a great extent, if not entirely, of experiencing pain while under the action of the knife, or other instrument of operation of a surgeon calculated to produce pain. *This is our discovery.*" "In other words," says our counsellor, "both the contending parties admit that it was known that the inhaling of ether vapors would produce "a peculiar effect," but deny that it was known that this "peculiar effect" amounted to that extraordinary degree of insensibility—that death of all sensibility—which *the experiments in Boston* demonstrated!"

In the direct face of this conclusion, Mr. D. next goes on to show that it "was known previous to the *experiments in Boston*, that the inhalation of ether would produce insensibility, and to this effect he quotes Dr. Warren, Mr. Hodge, Dr. Chambert, and Dr. Collyer, and remarks as follows: "In the autumn of 1844, Dr. Horace Wells, of Hartford, Conn., came to Boston, and performed an experiment with the direct object of producing, by inhalation, such a degree of insensibility, as to be useful under painful dental operations. He used the nitrous oxide gas pursuant to the hint of Sir Humphrey Davy.*

This experiment was made before a large company, Dr. Morton being present; and as the experiment was an entire failure, it subjected Dr. Wells to a good deal of ridicule, as well as Dr. Morton, who, being then a student in the Medical College, had introduced Dr. W. to several members.

This experiment and its object were not only known to Dr. Warren and the medical class, but then, or soon after, to Dr. C. T. Jackson and to Dr. Hayward and other physicians; and, in fact, was matter of considerable notoriety, &c. Dr. Warren, in his excellent work on etherization, says that, "in the autumn of 1844, Dr. Wells came to Boston, in company with Dr. Morton, visited me at the Medical College, for the purpose of requesting that the medical class should have an opportunity of hearing some remarks on the use of the nitrous oxyde *for the prevention of pain.* These remarks were actually made, and at a subsequent day a trial of the gas took place." Again Dr. W. states: "Dr. Marcy, of New York, appears to have had communications with Dr. Wells on the inhalation of ether and of nitrous oxyde; the result of which was, that he advised Dr. Wells to suspend the use of ether, and continue his trials with the nitrous oxyde," &c. And yet, say Drs. Morton and Jackson, in 1846, "it has never, *to our knowledge*, been known *until our discovery!* that the inhalation of such vapors (ether or nitrous oxyde) would produce insensibility to pain; this is our discovery!"

Can assurance go further than this? What shadow of reason, then, if either Drs. Morton or Jackson are to be believed, or their claims allowed, (and for a long time each conceded that the other was a joint or co-discoverer, although a disruption has since taken place,) how, we ask, can Mr. D. conclude that it was known previous to the advent of Messrs. J. and M., that "the inhalation of ether would produce insensibility?" "The idea of producing insensibility by inhalation," says our advocate, "for the prevention or mitigation of pain in surgical operations, had been presented on high authority." "Experiments had been made for this purpose, but not satisfactorily, with nitrous oxyde gas, with vegetable decoctions, and with various narcotics; and books had been published on the subject."

This statement is entirely at variance with the facts; for it will appear in the sequel that Dr. Wells had, previous to his visit to Boston, performed many surgical operations while the patients were in a perfect state of insensibility by nitrous oxide gas. Mr. D. continues: "On the other hand, it was *not known*, that the insensibility produced by inhaling *ether*† was of such a character and degree, and governed by such laws, as to be of great value in the most painful operations." (This, be it recollected, was the object of Dr. Wells's visit to, and lecture in, Boston, in 1844, and which he had fully established to the satisfaction of Drs. Ellsworth, Marcy, and the other physicians of Hartford, two years before the Boston experiments.

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* We presume this is the legal way of insinuating that Dr. Wells derived his knowledge of the effects of ether as an anaesthetic agent, from the works of Sir Humphrey Davy; whereas there is not a particle of proof to sustain such a charge,—on the contrary, it is well established that Dr. Wells knew nothing about Davy's hint on this subject. But anything that can serve to detract from the merits of Dr. W. seems all fair and above board.

† Why *ether* alone, why not any gaseous agents?

"What remained to be proved," says the advocate, "was in fact a problem in three parts :

"1. The degree to which this insensibility could be carried.

"2. The safety with which this could be done, and the general effects attending it:

"3. The use this state could be put to, in cases of painful operations."

All these had been proved by Dr. Wells, and communicated by him to Drs. Warren, Morton, Jackson and others, although, as often happens, in the single experiment performed by him at the Mass. Hospital, the gas did not fully take effect, from insufficient inhalation, or some other cause.

Mr. Dana asks, "What is the specific thing that makes this a *discovery?* It is that the inhalation of sulphuric ether will produce *such a degree* of insensibility, that the most severe operation may be performed without pain." Why does Mr. D. limit this agency to *ether*, when Messrs. Jackson and Morton extend it, in their specification, to *all gases* and *vapors* which produce the same effect, when it is not the particular anæsthetic agent which these gentlemen claim to have discovered, but the *fact* that such insensibility can be produced by any one, as to render surgical operations painless ? (See specification above.) The reason is obvious. Mr. D. knows that Dr. Wells had employed the *nitrous oxide* successfully in more than 30 cases, two years before Drs. Morton or Jackson were heard of in the matter ; that he had also experimented successfully with ether, but gave the preference to the former.

We shall not follow Mr. Dana in his long and tedious argument respecting the comparative claims of Messrs. Jackson and Morton ; the profession care not a straw in whose favor, so far as these individuals are concerned, the decision is made ; for they regard them both as having laid claim to a discovery to which neither has the shadow of a just right. We therefore dismiss this part of the pamphlet (and it constitutes its greatest portion) as a work of supererogation ; for the dispute lies not between these gentlemen, but between them and Dr. Wells ; that is, admitting there is any dispute in the case, which we do not, with all candid, impartial men.

We pass on, then, to notice merely what the advocate says relative to Dr. Wells's claim.

He remarks, "1. Dr. Wells makes no claim to the *ether* discovery. His experiments were solely with nitrous oxide."

Remarks.—It matters not, as to the "gist of the discovery," whether Dr. W. experimented with nitrous oxide, or ether ; the question in dispute is not relative to *ether*, but as to the discovery of the fact, that *any agent* could produce such a degree of temporary insensibility that a surgical operation could be performed, while the patient remained unconscious of it. This was done by Dr. Wells ; and moreover, we have the testimony of Drs. Marcy, Ellsworth, and others, (Bost. Med. and Surg. Journal,) under oath, that he employed both *ether* and nitrous oxide, preferring, however the former. (See Dr. Wells's pamphlets and affidavits.) "When I first made the discovery," says Dr. W., "rectified ether was used, as well as nitrous oxide gas. This is clearly proved by affidavit ; but I preferred the latter as being more agreeable to inhale, and less liable to do injury."—(Bost. Med. Journal,

v. 36, p. 299.) *It is not true*, then, that "Dr. Wells makes no, claim to the *ether* discovery," and it would not affect the question at issue in the least if it were.

"2. Again," says Mr. D., "he tried no surgical operation with nitrous oxide, nor knew of any having been tried, nor advised the trying of any."

Now, though we may admire Mr. D.'s boldness in hazarding such a statement as this, there is not a physician in Hartford but who will testify to its falsity. Dr. Ellsworth stated in 1845, (see Bost. Med. and Surg. Journal,) that the dentists of Hartford were in the habit of administering *nitrous oxide gas*, which enabled them to extract teeth without the consciousness of the patient, and that Dr. Wells was the discoverer of this. He made no secret of it; he spent his time and money freely in investigating the subject; he communicated it freely to the world, the Boston faculty, "who ridiculed him," included, and especially his former pupil and partner, Dr. Morton, and he was rewarded by "being subjected to a good deal of ridicule!" "This," the production of insensibility, say Drs. M. and J., in the specification of their patent, "*is our* DISCOVERY: the combining it with, or applying it to, any operation of surgery, for the purpose of alleviating animal suffering, as well as of enabling a surgeon to conduct his operations with little or no struggling or muscular action of the patient, and with more certainty of success, *constitutes our* INVENTION!"

We can only reconcile Mr. D.'s statement, that Dr. W. had "tried no surgical operation with nitrous oxide," &c., with the slightest regard for the truth, except by supposing that he excludes operations in dentistry from the category of *surgical* operations, a distinction neither founded in reason, nor contained in books. Dr. Edward, a staunch advocate also of Dr. Morton's claims, remarks in his communication in the Bost. Med. and Surg. Journal, vol. 36, p. 260, as follows: "That Dr. Wells discovered the fact, that nitrous oxide gas will, in some measure, mitigate pain in surgical operations, I do not deny. But when he argues from thence that he is entitled to all the credit when any one else discovers an equally powerful agent to produce similar or still more perfect results, I must resist his deductions. I cannot see the soundness of his logic or the validity of his deductions." We leave this without comment, only requesting the reader to bear in mind the above extract quoted from the specification of the patent. We stamp, then, the *second proposition* as we do the first, as unfounded in fact, and contrary to what has been proved by affidavit. Whether Dr. W. abandoned his experiments after his visit to Boston, does not affect at all the real merits of the question.

The course of argument of Mr. D., if indeed it deserves such an appellation, in respect to Dr. Wells's claims, is unworthy of any man whose regards for truth outweigh his subserviency to the interests of his clients. After having stated that Dr. Wells experimented solely with nitrous oxide gas, he afterwards admits, as proved by Dr. Marcy's affidavit, that Dr. W. did use ether in his experiments, but gave it up in conseqence of the advice of Dr. Marcy. Again: we are told that "in his pamphlets, Dr. Wells makes no claim on the ground of any experiments with ether, nor of any even with nitrous oxide, where there was a *surgical operation*. He confines both his evidence and his allegations to a few cases of extracting teeth under the effect of nitrous oxide gas," &c. (p. 554.) If a position can be sustained by reiterated misstatements, Dr. Morton may calculate on having his claims fully established. But we doubt, after all, the policy of employing as an advocate a lawyer so ignorant of medical matters as not to know that the extraction of teeth is a surgical operation ; for again we are told for the third time, that "Dr. Wells never brought his experiments to the test of a surgical operation, however slight," &c. There is no foundation, moreover, for the statement, that Dr. W. had abandoned the ether inhalation, and had no confidence in it ; such a charge made at random, and sustained only by Dr. Morton's evidence, can have no weight with any candid minds. We have Dr. Wells's assurance to the contrary, supported too by the testimony of respectable gentlemen in Hartford, and that suffices for us. Great stress is, moreover, laid upon a letter written by Dr. Wells, dated Oct. 20, 1846, to Dr. Morton. We give the letter entire.

"HARTFORD, Conn., Oct. 20, 1846.

Dr. Morton :

Dear Sir,—Your letter, dated yesterday, is just received, and I hasten to answer it for fear you will adopt a method, in disposing of your rights, which will defeat your object. Before you make any arrangements whatever, I wish to see you. I think I will be in Boston the first of next week, probably Monday night. If the operation of administering the gas is not attended with too much trouble, and will produce the effect you state, it will undoubtedly be a fortune to you, provided it is rightly managed.

Yours in haste, H. WELLS."

The above letter was written in answer to the following from Dr. Morton :

"BOSTON, Oct, 19, 1846.

"Dear Sir,—I have discovered a PREPARATION, by inhaling which a person is thrown into a sound sleep ; the time in which persons remain asleep *can be regulated at pleasure.* While in this sleep the severest surgical or dental operations may be performed, the patient not experiencing the slightest pain. *I have patented it*, and am now seeking agents to dispose of the right to use it. I have used this COMPOUND without a single failure in over 160 cases, in extracting teeth. My object in writing you is to know if you would not like to visit New-York and the other cities and dispose of rights.

Respectfully yours, W. T. G. MORTON.

This strikes us as remarkably cool, considering all the circumstances. No one but a man of genius would or could have written such a letter. It is not strange that Dr. Wells was imposed upon. Can any one believe that he, for a moment, imagined that this new "compound" was veritable *ether*, "and nothing else?" Is it strange that he wrote as he did in reply, supposing that a great improvement had been made upon his discovery of the ether and nitrous oxide? Is it wonderful, even, that he went to Boston to see about it? Let it be remembered, too, that at the date of this letter, Dr. Morton had neither obtained nor applied for a patent ; his specification being dated Oct. 27th, 1846. Does any one believe that there is any more truth in the other statement of Dr. M. that he had used "this compound" (ether) in 160 cases, without a single failure? It is well that ambition sometimes "doth o'er-eap itself and fall on the other side." It is so, emphatically, in the present instance ; but truth is omnipotent, and, we have no doubt, will here, as in other cases, finally prevail.

We here leave this subject, and shall not resume it ; our sole aim has een to vindicate the claims and memory of a man who is now removed beyond the sphere of praise or censure, although in doing so, we run the risk of offending those whom we are proud to rank among our friends. But justice must be done, though the heavens should fall. As a public journalist, we have a duty to perform to which all private considerations must yield. We have ever endeavored to perform it without fear or favor, and we shall continue to do so to the end. We should have regarded Messrs. Morton and Jackson's claims with, perhaps, more patience, if they had not, from the first, endeavored to appropriate the discovery of Dr. Wells to their own individual emolument. We can never forget the tenacity with which they held on to their *patent rights*, until they became convinced that they could not enforce them; when they made a virtue of necessity, and voluntarily relinquished what they could no longer hold.—*Fiat Justitia.*

Art. XII.—*Principles and Practice of Surgery.* By the late George McClellan, M. D., edited by his son, John H. B. McClellan, M. D. Philadelphia: Grigg, Elliot & Co., 1848, 8vo. pp. 432.

This work, the offspring of the genius, erudition and experience of the late George McClellan, constitutes an important addition to surgical science. We knew the author well—for he was one of our early friends—and we cannot but deplore his early loss as a public calamity.

Dr. McClellan was of Scottish origin, and born at Woodstock, Conn., on the 22d of Dec., 1796. His grandfather was one of the honored soldier patriots of the Revolution, and his father a gentleman of intelligence and worth, devoted to the manufacturing and agricultural interests of the country. He graduated at Yale College in 1815, at the early age of 18 years, with a high reputation for scholarship, especially his knowledge of the natural sciences. Soon after leaving college, he commenced the study of medicine with the late Dr. Thomas Hubbard, of Pomfret, Conn., afterwards Professor of Surgery in the Medical College of New Haven. In 1817, he repaired to Philadelphia to attend the lectures in the University of Penn., where he became the private pupil of the late Prof. J. S. Dorsey, at that time Prof. of Materia Medica in that Institution. In 1819, Mr. McClellan received his Doctorate, the subject of his thesis being "The Tying of Arteries," a production which foreshadowed his reputation as one of the master spirits in surgery. In 1821, he married into one of the most respectable and influential families in Philadelphia, and immediately established himself as a practitioner in Walnut-street; at the same time engaging in the delivering courses of lectures on Anatomy and Surgery. Our acquaintance with Dr. McC. commenced a few years subsequently to this period, and soon after the opening of the Jefferson Medical College. The vivacity of his manner—his extraordinary fund of knowledge on all professional subjects—his animation and eloquence as a teacher and lecturer—his unequalled buoyancy and exuberance of animal spirits—his boldness and skill as an operator—his impulsive and energetic manner—the originality of his conceptions—the cordiality and frankness of his deportment—the generosity and nobleness of his nature—all these impressed us most favorably, and led us to anticipate for him that success and renown which afterwards crowned his persevering and unsurpassed efforts. For the space of fifteen years, Dr. McC. delivered annual courses of lectures in the Jefferson College, to constantly increasing classes, and he lived to see the school of his own creation, first in point of numbers on this side of the Atlantic. In 1838, he retired from the Jefferson School, and became a private teacher; in 1839, he established the Medical Department of Pennsylvania College. At what time he resigned his situation in this school, we are not informed, nor of the causes which led to his retirement. We saw him, with firm and elastic step, walking rapidly in Chestnut-street, on the 7th of May last, at the meeting of the Medical National Convention; on the 9th, two days after, he ceased to breathe. His disease was ulceration of the bowels, terminating in perforation and peritoneal inflammation.

The failings of Dr. McC., such as they were, "leaned to virtue's side." He was generous to a fault; he was frank and honest to the very borders of imprudence; he was open and straight forward to such a degree, as to be called unwise and impolitic; he was impulsive to that extent, as almost to appear—at times—insane. And so also in surgery, as an operator, he was so novel and bold, as to be thought rash and dangerous; his conceptions were so rapid, as to render him liable to the charge of acting precipitately and without due reflection; burning with the true zeal of surgical science, his ardor may have caused him sometimes to o'erleap some of the conventional usages of the profession; but after all, his heart was in the right place; he was magnanimously generous, and transparently unsuspicious; guileless, unceremonious; a surgical hero, whom Carlyle would delight to honor.

Dr. McC. has not been a voluminous writer. He reported several of his important surgical operations for the American Medical Recorder; afterwards he became one of the conductors of the American Medical Review and Journal; he edited Eberle's Theory and Practice of Physic, with Notes. And here we have the crowning work of his life, filled with the erudition and rich experience of a life of study, reflection and observation; a work of undoubted genius and high practical value; enriched with the established principles of surgical science; and illustrated, enforced and adorned with facts and cases gathered from the bedside.

This work of our lamented, friend is destined, we doubt not, to surprise those who deemed its author inconsiderate, inconclusive, and wanting in method. It shows him to be a logical and profound thinker, a close and accurate observer; a concise, elegant and classical writer. He has taken rank among the *dii majores* of our profession; and no spirit of envy or jealousy can pluck him thence.

It would give us pleasure to present an analysis of this treatise, but our limits forbid. The precepts inculcated will be found eminently practical and judicious, and the illustrative cases in the highest degree interesting—nothing more graphic, of a surgical nature, has appeared since the days of John Bell, than many parts of the work. The writer evidently describes, *con amore*, what he has seen, and tells what he knows. There is nothing of a speculative or theorizing character in the book; all is practical, plain, common-sense teaching; such as always characterizes great minds, thoroughly imbued with knowledge. The work richly deserves a place in every medical library: students could hardly desire a better text-book.

ART. XIII. *The Lungs—their Uses and the Prevention of their Diseases;* with Practical Remarks on the use of Remedies by Inhalation. By JAMES STEWART, M. D., etc. Wm. H. Graham. 12 mo. pp. 100.

THIS work contains many very valuable directions respecting the proper use of the lungs for the prevention of the various diseases to which these organs are subject, together with the result of the author's experience in the use of inhalations in their treatment for several years past. Dr. Stewart has had vast opportunities of making himself acquainted with the effects of various professions, trades, etc., on the respiratory organs, and the importance of full, free and profound respiration in maintaining the health of the body: these opportunities he has diligently improved, and presented to the profession in this work. On the subject of the use of the lungs as a preventive of pulmonary disease, he remarks:

> "It is well known, that the more an organ is exercised within the bounds of its legitimate use, the more will it be developed, and the better will it be prepared to discharge its proper functions. The perfections of the limbs of a professional dancer, and the wonderful movements and delicate accuracy of the fingers of the artisan or musician, are familiar examples of a state of perfection from habitual use. In these and similar instances, a full development of the function of the member accompanies the physical development of all its parts. It may also be considered an axiom, that the more perfect an organ is in its development, the less is it liable to disease. These principles are fully applicable to the lungs, and a disposition to disease may often be arrested by their judicious use, in voluntarily assisting them in the development of their parts.
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> A contracted form of the chest gives evidence of an imperfect development of the lungs, or of their partial contraction from previous disease; and these organs can never be disproportionately less than other parts of the body without the individual experiencing general debility, and, sooner or later, the invasion of disease. A very simple method of developing the parts concerned in the important function of respiration, is the practice of inflating the lungs daily by a full inspiration, and then allowing the air inspired to return slowly by compressing the lips. The air cells will thus be completely filled and slowly emptied, whereby their gradual enlargement will be effected. This should be done at stated periods, morning and evening; five or six inspirations at each time, if persevered in for a few weeks, will render the effort an agreeable one, from the sensation which the exercise of the full power to respire always produces. The patient should first assume an erect posture by placing the back, shoulders and head firmly against the wall of the apartment. I have known the chest of one who had every appearance of incipient consumption, expand under this process so as to be decidedly appreciable by a tailor's measure in a month; and a year's perseverance in this course has produced a visible alteration in the form and size of the chest, giving the individual that sturdy appearance which is the usual attendant upon a complete development of the lungs.
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> "The removing, also, of an extreme susceptibility and delicacy of the lungs, and thereby preventing their becoming diseased, is one of the most striking results of a systematic perseverance in exercising the respiratory organs. I have known those who have uniformly been attacked with cough in the fall of the year for several years in succession, entirely relieved from this effect of a change of temperature, and to remain totally free during all seasons and on every change of weather, although constantly exposed to all the vicissitudes which occur in active life. In one individual the lungs were so quickly affected by the cold air of a winter's night upon issuing from a warm room, and so contracted, that it was almost as difficult to breathe as in an attack of

spasmodic asthma. After practising carefully and upon correct principles the inflation of the lungs for a few months, every vestige of this susceptibility to cold disappeared; and at the present time the most violent and coldest north-west wind causes not the slightest feeling of his old complaint."

We have only room for the introductory remarks to the use of inhaling remedies.

"*Fumigations.*—Fumigation, or inhaling the smoke and vapor of certain substances, has, from time to time, been recommended; but the careless and rough manner in which it has been performed, and the want of discrimination in the diseases for which it has been recommended, has caused it to be, at present, almost entirely neglected. Indeed, *fumigation* can scarcely be applicable to diseases of the lungs; the structure of which is so delicate that the minute particles of which smoke is composed, finding their way into the air cells become a source of irritation to the lungs. In smoking tobacco or stramonium for asthma, the unburnt particles accompany the essential oil of the plant, in the form of smoke, and not unfrequently defeat the object desired. So, also, with fumigation of tar: the mode of preparation recommended by Sir Alexander Crichton, by the direct application of heat, extricates also the products of imperfect combustion. In some affections of the lungs, great relief has been experienced; but in some forms of the same disease, complete disappointment has ensued, resulting from the cause already mentioned, connected with a want of sufficient care in examining the precise condition of the lungs.

"The neglect of a proper discrimination in the disease has led to repeated failures in the use of the means referred to. Thus fumigation with tar has been used in "consumption." There can scarcely be anything more indefinite than this term to convey an idea of the state of the lungs. Some persons with "consumption" may have so active an inflammation of some portions of the lungs or air passages as to render the remedy altogether inapplicable. So with asthma; if a suitable and careful investigation be not made, the fumes of tobacco may be ignorantly applied in the congestive form, and not in the spasmodic. The smoke of rosin has been advised for chronic cough; but if the actual condition of the mucous membrane of the air tubes is that of inflammation in any degree, it will greatly aggravate all the symptoms. Indeed, fumigations are applicable to but few conditions of these parts; but all the appropriate remedies can be breathed into the lungs through the medium of watery vapor, without producing any of the evils of an extraneous substance.

"*Vapor of Water.*—As water is freely formed in the lungs, and as they are always bedewed with its vapor, it is obvious that this is the most natural substance that can be placed in contact with them. It is, therefore, but following the indications of Nature to use it as a medium for applying the requisite remedies, and thus escape the hazard of employing irritating and uncongenial substances which must enter the lungs by smoking or fumigation."

ART. XIV.—*Memoire sur les Rétréeisements Organiques du Canal de l'Urètre et sur l'emploi de noveaux Instrumens de Scarification et d'Incision, etc.* Par MARTIAL DUPIERRIS. Paris.

THIS volume comprises the results of the author's more mature experience in the cure of strictures of the urethra by scarification. His first observations were inserted in the Bulletin Thérapeutique, in 1839, since which time he has devoted himself exclusively to this mode of treatment, to the exclusion of all others. In ch. 7 he thus expresses himself: "Scarifications act as resolvents and irritants; they produce on the surface of ulcers a plastic exudation, which proceeds from the circumference to the centre, when the ulcer is cured without disturbing the neighboring parts. The words of Lisfranc, in his lessons on the simple ulcer, contain in few words the history of scarification; they express perfectly, as we think, the idea that should be formed of this therapeutic agent, if we have correctly observed its effects. Most authors view scarification only as a mechanical action, analogous to dilatation, and whose sole action is to enlarge the canal from the centre to the circumference: this is, as we think, only to contemplate a part of its effect. The urethra, when strictured and subjected to scarification, recovers the capacity, elasticity, and sensibility it had lost, by the contraction of which it is the seat; and of necessity in arriving at its natural state, passes through a series of vital modifications, which are far more effective in curing than the mechanical dilatation."

The author adduces high names in favor of his favorite plan of treatment—Civiale, Ricord, Malgaigue, and others; and gives plates of four very ingenious instruments for effecting the scarifications.

How far they will prove effective, and whether this plan ought to supersede mechanical dilatation, with the occasional use of caustic, time will develop; for ourselves, we have our doubts; the admirable effect of pressure in removing lymphatic deposites, and caustic in resolving congestion and thickening of the palpebræ, (which present so much analogy in their pathological condition to that of stricture,) induces us to wish for more light before we adopt this practice, to the exclusion of other well-tried means. Yet we must adopt the author's motto: "The clinical register is the touchstone of theories." There is an appendix detailing the results of the author's mode of cure by softening or "malaxation." It consists of introducing as large a sound as possible for thirty or thirty-six hours, more or less, and then subjecting the stricture to pressure three or four times daily, in different directions, and for a short time with the fingers; during which process, should there be too much irritation, the warm bath is occasionally used. This mode is said to have been completely successful in three cases. Again, we doubt its efficacy in many cases, and refer to the author's motto.

Art. XV.—*A Descriptive Catalogue of the Anatomical Museum of the Boston Society for Medical Improvement.* By J. B. S. Jackson, M. D., Curator of the Museum, Prof. of Pathol. Anat. in Harvard University. Boston: W. D. Ticknor & Co. 1847.

During a recent visit to Boston, we were favored by the author of the present publication with an opportunity of examining the museum herein described; and we hardly know how to express our estimate of its value, or our obligations to the accomplished Curator for his kind civilities and his aid in identifying the different specimens. This collection in morbid anatomy, one of the most extensive and valuable in this country, has been gradually made by the members of "The Boston Society for Medical Improvement," an association founded in 1828, and which has held meetings regularly, twice a month, to the present time. At these meetings, beside the reading of an original paper, interesting cases are detailed, of which a full report is made by the Secretary; and from these reports the present volume is made up, and from a selection of the specimens thus exhibited, the cabinet of the Society has been mainly formed. The peculiar interest attached to the collection is derived from the fact, that, in most instances, the specimens are accompanied with authentic histories ofthe cases from which they are derived.

The first seventy-six specimens described are those of *healthy bones;* showing their development and structure, the effects of age, anatomical varieties, and national sculls. The second section treats of *diseased bones*, numbering 237 different specimens, and exhibiting every variety of morbid appearance ; this portion of the collection is extremely interesting and extensive. There are 16 specimens described, exhibiting disease of *the soft parts about the joints ;* 61, of disease of the *heart and blood-vessels*, embracing every form of cardial affections ; 42, of disease of the *organs of sense ;* there are 27 cases of disease of the *vocal and respiratory organs ;* 83, of the *alimentary canal ;* 50, of the *organs accessary to the alimentary canal ;* 63, of the *urinary organs ;* 36, of the *female organs of generation ;* 22, of the *male do. ;* 47, of *utero-gestation ;* 122, *monstrosities ;* 32, *parasites ;* and 23, *miscellaneous.* Besides all these, which are beautifully put up and preserved, the Museum contains an extensive collection of Chinese paintings, presented by Dr. Hooper, accompanied by nearly a complete history of the cases, forming a rich series of illustrations, far more valuable than any preserved specimens of disease, and which nothing could equal but an examination of the patients themselves. There is also an extensive suite of casts on the shelves, representing malformations and diseases of various character. When to these are added the beautiful anatomical preparations and models of disease presented by Dr. Shattuck, it is but just to say, that a richer collection in healthy and morbid anatomy cannot be found in this country, and that great credit is due to the Society for the example thus placed before the profession for imitation in other places ; and more especially to the indefatigable Curator, to whose diligence, unwearied assiduity and enlightened zeal we owe the present volume. Although especially useful to the members of the association, and those who have access to the cabinet, it is an extremely interesting and valuable work to any physician, for its accurate histories of cases, and graphic description of morbid appearances. The part relating to monstrosities wlll perpetuate the name of the author, as ranking next to Geoffroy St. Hiliare in this department of science. It is but a simple act of justice that such men should be rewarded ; and it speaks well for the profession, when we see modest merit and unpretending science thus crowned with the highest honors.

ART. XVI.—*Ophthalmic Memorandæ respecting those Diseases of the Eye which are more frequently met with in practice.* By JOHN FOOTE, M. D., &c.—New York : S. S. & W. Wood, 261 Pearl-street. 1848. 18mo. pp. 131.

WE here have a very useful little manual on Ophthalmic Diseases, drawn from the highest sources, and the best authorities, in the personal experience of the author, altogether forming a very convenient book of reference to the student and practitioner of medicine. There is no subject connected with the eye, passed over ; and the rules of treatment laid down are in a high degree safe and judicious.

Art. XVII.—*The Medical Practitioner's and Student's Library.—The Principles and Practice of Midwifery.* By David H. Tucker, M. D., Prof. of the Principles and Practice of Medicine, &c. With numerous illustrations. Philadelphia : Lindsay & Blakiston. 1848. 12mo. pp. 405.

Elements of General Pathology. By Alfred Stillé, M. D. etc. Philadelphia : Lindsay & Blakiston. 1848. 12mo. pp. 483.

These two works form the commencement of a series of practical essays on Medicine, Surgery, and the Collateral Sciences, adapted to the use of students and medical men ; and which may be afforded at a more reasonable rate than works on medicine have heretofore been furnished. The design is a laudable one, deserving of the cordial approval and patronage of the profession, and destined to be crowned, as we believe, with unequivocal success.

These two volumes, at least, argue well for the success of the enterprise on which the worthy publishers have entered. They present within a moderate compass the substance of many ponderous tomes and monographs, condensed, systematized, and arranged, in a very able and satisfactory manner. Dr. Tucker, for example, has given us in the space of 405 12mo pages, (price $1 25,) one of the most complete and satisfactory digests of obstetrical science and art, to be found in the language ; and the same remark will apply to the truly scientific and philosophical essay of Dr. Stillé on general Pathology. Both of these gentlemen have done themselves great credit for the skill and judgment with which they have worked up the vast materials at their command ; setting forth all the acknowledged facts connected with the subjects of which they treat, with great perspicuity and force, and yet without that minuteness of detail which wearies while it does not instruct. The style is plain, concise and intelligible ; the principles, those which are now admitted by the ablest authorities. Should the remaining works of the series, on *Minor and Clinical Surgery, Special and General Anatomy, Physiology, Medical Chemistry, Materia Medica and Therapeutics,* and *the American Dissector,* be equally well executed, the profession will be furnished with a complete *multum in parvo* library of medicine, at such a rate as to be within the reach of all, and of such a character as to merit general patronage.

Art. XVIII.—*On the Theory and Practice of Midwifery.* By Fleetwood Churchill, M. D., &c., With Notes and Additions, by R. M. Huston, M. D., etc. 3d American Edition, revised and improved by the author. With 128 illustrations. Philadelphia : Lea & Blanchard, 1848, 8vo. pp. 521.

As we have formerly called the attention of our readers to the extraordinary merits of this work, we need only add, that it continues to occupy the foremost rank among publications connected with the obstetric art. The Editor has added also to its utility by posting up all the new facts and observations which have transpired since the appearance of the last edition.

Art. XIX.—*Obstetric Tables.* Comprising Graphic Illustrations, with descriptions and practical remarks; exhibiting on Dissected Plates, many important subjects in Midwifery. By G. Sprall, Surgeon Accoucheur. First Am. Edit., carefully revised, and with additional Notes and Plates. Philadelphia: Thomas, Cowperthwaite & Co. 1848. 4to.

We cannot better convey our own impressions relative to the merits of this beautiful work, than in the words of the American editor. "Its superiority over any other series of obstetrical illustrations, is universally admitted. It is a happy combination of the *Picture* and the *Model*, combining the convenience of one with the completeness of the other. To the busy practitioner, who wants something to refresh his memory, it obviates the necessity for continual *post mortem* examination, by supplying every point of reference he can possibly require; to the student it is equivalent to a whole series of practical demonstrations, with the advantage that it can be carried about with him and studied wherever he may desire.

"This is particularly the case with the plates explaining the use of the instruments. No *single* pictures could ever convey the ideas, and enable the student to understand the descriptions; but these dissected plates are almost equal to the mannikin itself. The newly-added representation of the Cesarean operation, is another instance. The *best* views of that operation, while standing alone, are almost as likely to mislead as to guide correctly. This plate, however, exhibits the whole process in so complete and connected a manner, that nothing can be misunderstood."

This work enjoys a high European reputation, higher perhaps than any other of the kind. The American artists, Messrs. Wagner & McGuigan, have executed their part of the task with great fidelity and skill, while the American editor has added some useful notes, designed to supply all deficiencies in the original, and bring the work up to the present state of obstetrical science. As this is the *only* work of the kind yet published in America, we trust it will receive ample encouragement from the profession.

Art. XI.—*The Young Stethscopist; or, The Student's Aid to Auscultation.* By Henry J. Bowditch, M. D., one of the Physicians of Mass. Gen. Hospital. 2d Edition. New York: S. S. & W. Wood. 1848. 12mo., 303.

Dr. Bowditch has the honor and credit of having given to the profession one of the most concise, clear and comprehensive works, on physical diagnosis, hitherto published in any country. It is limited chiefly, it is true, to the physical signs, but the physician can easily comprehend the relations they ought to bear to the rational signs, so that the omission is not perhaps of any great consequence. We agree with the author, that in most works of the kind there are too many minute distinctions in regard to particular sounds, a diffuseness of detail that serves to discourage rather than allure onward in the study of auscultation. This fault has been happily avoided, and the result is a work of peculiar value to the student and practitioner of medicine.

Art. XXI.—*Transactions of the Medical Society of the State of New York*, vol. 3, part 1. 1848. 8vo. pp. 84.

This number of the yearly Transactions of our State Medical Society contains several articles of an interesting nature; among which are two addresses by the President, Dr. T. W. Blatchford; an Essay on Diseases of Saratoga County, by Dr. Brisbin; an Address before the Columbia County Medical Society, by Dr. Bates; Observations on Agriculture in its bearings on Medicine, by Dr. Alexander Thompson; on Diseases of Otsego County, by Dr. J. S. Sprague; Remarks on the Influence of Dress, by Dr. W. D. Purple. The Appendix contains the usual Abstract of Proceedings, &c. The meetings of the Society are evidently increasing in interest year by year; but there is still room for the display of a little more of the *esprit du corps*, which ensures progress in every calling and profession in life.

Did our space permit, we would gladly quote from the annual address of the able and learned president, Dr. Blatchford, which is characterized by great originality and quaintness of style, and richness of material. Our expectations were by no means moderate, but we deem it proper to say that they have been more than realized. Our State, prolific as it is in great men, has few superior to the accomplished author of the Discourse on Temperaments.

ArtXXII. *On the Causes and Treatment of Abortion and Sterility;* being the result of an extended and practical Inquiry into the Physiological and Morbid Conditions of the Uterus, with reference especially to Leucorrheal Affections and the Diseases of Menstruation. By James Whitehead, F. R. C. S., etc. Philadelphia, Lea & Blanchard. 8vo. pp. 370.

There is no class of diseases more interesting to the general practitioner than those connected with the function of reproduction; and we are acquainted with no work which treats of them in a more clear and satisfactory manner than this. It is chiefly occupied in a description of the phenomena, healthy and morbid, connected with menstruation; the conditions which influence it at its commencement; its diseases, and the last menstrual crisis; the signs of pregnancy; abortion, its statistics, causes and treatment; lastly, sterility, its causes and treatment. We can confidently recommend this work to the profession, as embodying an immense amount of practical information of the highest value, the results of careful observation and scientific investigation, and for which he will seek in vain elsewhere.

Art. XXIII.—*Practical Observations on Certain Diseases of the Chest, and on the Principles of Auscultation.* By Peyton Blakiston, M. D., F. R. S., &c. Philadelphia: Lea & Blanchard, 1848.

This is an octavo volume of 384 pages, the first 83 of which are devoted to Auscultation and Percussion; and the remainder of the volume to Thoracic Aneurisms, Chronic Pleurisy, Plastic Pneumonia, and Phthisis Pulmonalis. We have not had it in hand long enough to read it, much less to make an analysis of its contents. N. S. D.

ART. XXIV.—*On the Blood and Urine.* By JOHN WILLIAM GRIFFITH, M. D., F. L. S., &c., G. OWEN REES, M. D., F. R. S., F. G. S., &c., and ALFRED MARKWICK, M. D., &c. in one volume. Philadelphia: Lea & Blanchard, 1848.

THIS is an elegant octavo volume of 460 pages, containing three essays, by the three gentlemen whose names are given above. The first, by Dr. Griffith, "contains a description of the General, Chemical, and Microscopical Characters of the Blood and Secretions of the Human Body, as well as of their components, including both their healthy and diseased states; with the best methods of separating and estimating their ingredients; also, a succinct account of the various concretions occasionally found in the body and forming Calculi." The second, by Dr. Rees, is "On the Analysis of the Blood and Urine in Health and Disease; and on the treatment of Urinary Diseases." The third, by Dr. Markwick, purports to be "A Guide to the Examination of the Urine in Health and Disease, for the use of Students." Though the late hour at which this work came into our hands, precludes our expressing any opinion of its real merits, yet we have no doubt that it will be found an interesting and useful volume. N. S. D.

PART THIRD.

American Intelligence and Editorial.

THE AMERICAN MEDICAL ASSOCIATION.

While the present number of our Journal is passing through the press, the first Annual Meeting of the American Medical Asociation is in session at Baltimore. We learn from various sources that there is a very full representation of the profession present; and that the proper business of the Association is progressing with much harmony and good feeling. The election of officers took place on the second day, and resulted in the choice of Dr. Alexander H. Stevens, of this city, for President; Dr. Wm. M. Awl, of Columbus, Ohio, Dr. J. C. Warren, of Boston, Dr. Saml. Jackson, of Philadelphia, Dr. Paul F. Eve, of Georgia, Vice Presidents; Dr. A. Stillé, of Philadelphia, and Dr. H. J. Bowditch, of Boston, Secretaries.

We are also informed that all the standing committees are prepared with full and interesting reports on the various subjects referred to them. But a particular account of the proceedings must be deferred until our next number, when we shall be able to lay them before our readers in an official form.

N. S. D.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF MICHIGAN.—We are informed, by a communication from one of the Regents of the University of Michigan, that at a recent session of the Board, measures were adopted for organizing and carrying into operation the Medical Department of their State University. The plan they have adopted closely resembles that of the University of Virginia, at Charlottsville. Their Medical Term continues throughout the year, with only the same vacations as in the Literary Department. They have resolved to commence the operations of the School with only *three* Professors, filling up their number as the funds of the University will permit. Two have already been appointed, viz., Drs. Abram Sager and S. H. Douglass, both of whom are also Professors in the Literary Department of the Institution.

The University is well endowed, by means of the public lands, and is founded on the most liberal basis, the only College expenses being an admission fee of $10, and a charge of from $5.00 to $7.50, per annum, for room rent and janitor fees. The tuition is free. Whether these terms extend to the Medical Department, as well as the Literary, our information does not enable us to state positively.

The Regents have also taken high ground in regard to their *standard* of requirements, and have very judiciously provided for an independent Board of Censors to examine all candidates for the honors of the Medical Department. The Institution is located at Ann Arbor, and we certainly wish it a long career of prosperity and usefulness. N. S. D.

May 4th, 1848.

STATISTICS OF THE NEW YORK INSTITUTION FOR THE BLIND.

The following Statistics of the New York Institution for the Blind, with which we have been politely favored by the able and intelligent Superintendent, will be found highly interesting.—ED.

INST. FOR THE BLIND, Sept. 27, 1847.

CHARLES LEE, M. D.:

Dear Sir,—Below you will find the statistics you request, so far as it is in my power to furnish them. I have no means of ascertaining the number of *servants* previous to 1840. The numbers which I have set down are a *probable estimate*, taking the *proportion* of subsequent years as a basis.

Year.	No. of pupils	Officers.	Servants.	Total inmts	Deaths.	Age at time of decease.	Diseases.
1832	7	2	1*	10	1	10	Cholera.
1833	16	4	2*	22			
1834	26	4	4*	34			
1835	41	6	6*	53			
1836	51	6	8*	65			
1837	64	7	9*	80	1	18	Consumption.
1838	63	7	9*	79	3	20, 17, 10	2 Consumption and 1 ulcer of bowels.
1839	69	7	10*	86	1	16	Consumption.
1840	72	7	10	89			
1841	68	7	12	87	2	17, 21	Consumption.
1842	76	8	10	94	2	32, 28	Consumption.
1843	87	7	12	106	1	21	Ulceration of bowels.
1844	111	7	14	132			
1845	125	7	17	149	4	23,11,12,12	3 ulceration of bowels and 1 consumption.
1846	125	9	18	152	1	16	Ulceration of bowels.
Partial 1847	128	8	17	153	1	14	Hydrocephalus.

The deaths have been *confined* to the pupils, no officer or servant having died while discharging their duties at the establishment. The current year, being imperfect, is marked "*partial.*" The Institution was established in 1832.

Considering the indisposition, and as well as the inability of the blind to take much active exercise in the open air, their constitutions, in the case of those *born* blind, often *naturally feeble*, and in others impaired by the disease which destroyed the sight, or the treatment to which the patient is often subjected to restore it—I think the proportion of deaths in our Institution very small. Out of 282 that have been inmates of the establishment since it was founded, so far as I am able to ascertain, only 26 have died, including the deaths at the Institution and those abroad.

It will give me pleasure, sir, to afford you any further information that may be in my power. Very respectfully, yours,

JAMES F. CHAMBERLAIN,
Supt. N. Y. Inst. for the Blind.

CHLOROFORM.—We acknowledge our obligations to Prof. Simpson, of Edinburgh, for several pamphlets relative to the use of ether and chloroform in midwifery practice; the last entitled "Remarks on the alleged fatal case of Chloroform Inhalation," as reported in the London Lancet of Feb. 12. We are extremely gratified to learn that Prof. S. has continued to use chloroform in obstetric practice with uniform success, up to the present period; and if the same results attend its use in the practice of others, it will prove one of the most valuable gifts ever bestowed by science upon the human family. Our fears, we acknowledge, have hitherto prevented us from having frequent recourse to it; but where we have, we are free to confess we have seen no harm result from its employment. Like all other powerful agents, it must be used with extreme caution, and only after a most thorough investigation of the condition of the patient, and all the circumstances of the case. The state of the lungs and heart can never be passed by, without incurring great danger.

MARSH MIASMATA.

The facts contained in the following article, taken from that most excellent periodical, the "American Journal of Agriculture and Science," are so appropriate at this time, when some writers seem disposed to deny altogether the existence of such a thing as Marsh Miasmata, that we cannot forbear giving them to our readers. And as the language of the writer cannot be abridged without obscuring the statements, we quote the article entire.—Ed.

MARSHES AND THEIR EFFECTS ON HUMAN HEALTH.—BY WILLIAM BACON.

I have recently noticed a valuable article on "marshes and their effects on human health," taking the rounds of the press, and appearing to have originated in your valuable periodical. Facts corroborative of the assertions of that article, are so freshly dated in my recollection, and so mournfully impressed on the minds and yet bleeding hearts of many in this community, that it appears to me proper to throw them into the same channel, that perchance the tide may bear them onward, so that they may contribute to the protection and preservation of human life.

In the outset, it may be convenient for the reader to become acquainted with our geographical and geological features. First, then, we are situated on the western line of Massachusetts, with the Taconic hills on our western boundary. These hills, from the gap where the western railroad passes them, rise as you pass northward, until it reaches an elevation of more than 2000 feet above tide-water, and about 1000 feet above the level of the railroad. The streams that rise from this hill mostly take a south-easterly direction, and their course is marked with ravines as is usual along mountain streams. Half a mile north of the Congregational church, one of the deepest of these ravines opens into the valley, and from its debouchure the mountain widens to the east. Still further north, at about the same distance, it makes another offset, and yet another from Lebanon gap, where its southern front makes an east-north-east direction. Lenox mountain is our eastern boundary, and its general course is a south-west direction. So it will be seen, that our only outlets are formed by narrow valleys on the north-east and south-west. Lenox mountain is abrupt on its western surface ; the Taconic passes down in a more gradual slope, so that cultivation is carried to its summit. On the eastern borders of the town, lands *convenient* for tillage are higher than corresponding lands in the west part by some forty or fifty feet. Thus described, our territory presents the form of a basin, with a north-eastern and south-western outlet. Through this basin lies an almost unbroken line of swamp, in some places, to be sure, too much elevated to become the receptacle of stagnating waters and vegetable substances gathered to decay. Through and in the immediate vicinity of this low land, passes the western railroad, on which operations were commenced in 1838.

The place had been remarkable for the health and longevity of its inhabitants from its early settlement, which commenced about the middle of the last century. Influenzas, to be sure, were sometimes prevalent, and consumptions carried their victims to the grave in good old age. But fevers were of so rare occurrence, that visitations from them were seldom feared.

The autumn of 1840, however, was destined to open a new era in our statistics of health, for that season the typhoid prevailed with almost unmitigated malignity, in the neighborhood to which its operations were mostly confined. Scarcely a house would be passed in which some of the inmates were not smitten, and in many of the dwellings death found his victim. The territory where the disease prevailed most, was about a mile and a half in length, along the base of the Taconic, and its ravages were principally confined to one street, though there were many severe cases in other parts. It was in vain that the origin of the disease was sought, and equally vain and futile were many of the causes to which its existence was then attributed.

Those who remember the summer of 1840, will recollect that in western

Massachusetts and eastern New-York it was a season of much heat and great drought. Those who saw the operations of grading the railroad through this region know very well, that in raising the embankments through the swamps, especially the lower one, that seemed almost a bottomless abyss, the sinking of the earth carried on, caused much decomposing matter to be thrown up and exposed to the influence of the sun through that hot dry summer. The early rains of autumn were in no way calculated to retard the decomposing process to which these huge masses of matter had been exposed by the chief of nature's causes, and hence it is not strange that the atmosphere became infected with poison too foul to breathe.

But the inquiry comes up, if the atmosphere was infected with the seeds of dreadful diseases, why were its operations so generally restricted to a given district? The reason is conclusive: scarcely a morning passed, from the middle of August until cold weather came on, but that a dense cloud of fog might be seen extending along the line of the railway through the town.

And very often, as the morning fog passed off, it might be seen from the upper parts of the town, to follow up the streams that originate at the west mountain, and remaining longest over the precise territory where the disease principally prevailed, and with a density so great, that its upper surface, as seen from the eastern hills, did not appear to reach higher than half the altitude of the mountain.

But these miasmatic vapors were in nowise limited to morning visitations; they often came on at early evening, and made sure their sojourning through the night, and no doubt kept the whole atmosphere continually polluted with their poison, which the taste or smell of a person out and exposed to its influence could readily detect. The fever of 1840 continued, to a certain extent, to prevail until mid-winter, and perhaps a few cases after that time; but a majority of them occurred between the first of September and the middle of December.

Usual health prevailed in the place through the following spring and summer, which, like the corresponding seasons of the previous year, were marked with unusual drought. But in early autumn the sickness again commenced, extending over the same territory, and in many cases attended with similar fatal results. The railroad was completed and put in operation early in 1841, consequently the throwing up of these swampy lands was pretty much ended. But the poisonous effluvia of earth already disturbed was not removed, and the action of the elements upon it again produced similar results. In 1842 a few cases of the fever occurred, but the number, compared with that of the two previous years, was diminished at least seventy-five or eighty per cent.; and the number diminished yearly, as nature removed the cause by giving frosts and rains to stop the progress of the great body of vegetable decomposition, which had charged the atmosphere with its poisonous qualities.

We have already remarked, that the surface of the town, as seen from the surrounding hills, pretty nearly marked the form of a basin. The curious will inquire then, why the fever did not extend all over the place. The reason is conclusive. The fogs, after they had risen, passed down the railroad track to the lower swamp, which was broken up the deepest, and from this it passed up the lowland in a westerly and north-westerly direction, until its progress was arrested by the west hills, where it remained stationary until its fatal qualities were discharged in quantities sufficient to produce the effects already mentioned.

The cases east of the railroad were few, a circumstance which may conclusively be attributed to the circumstance that these deadly fogs seldom passed off in that direction. Two causes for this result. First: the streams from the east mountains, the most, indeed with one or two exceptions all of them, pass off without any communications with these swamps, consequently there are no such direct channels for the ascent of vapor in that direction as on the west. The region on the east is more elevated of the two, which likewise operated as a barrier to its approach if natural causes have effect, which we leave to others to decide. Second: the seasons were attended with frequent easterly winds, which, of course, drove the vapor in a westerly direction. But it was not always in the presence of the east winds that the fogs were most dense or longest in continuance. On the contrary, in the still atmosphere, the vapor passed off, as in natural channels, until its progress was arrested by the mountains, against whose sides it hung like a heavy cloud until the sunshine and its own exhausting power dispelled it.

We have been particular in the foregoing relation of the cause and effect of a miasmatic atmosphere, arising from impure exhalations from lowlands, because the case was so strongly marked, that it would appear that no mistake could be made in the matter. What we have shown to have been on a large scale, no doubt, in oft repeated instances, exists in smaller ones. A frog pond near a dwelling, a sink or cispool, where accumulating matter is allowed to decay, may be as fatal in its limited operations as was this wholesale dealing out of malignant vapor on a district where health in previous years had been a distinguished quality of the climate. How far such visitations may be remedied by timely researches and proper precautions, is not for us to say. We leave it for an enlightened and sagacious public to draw their own inferences, and make such application as in their wisdom appears most proper.

Richmond, Mass., 1848.

Nursing Sore Mouth.

Dr. Lee:

Dear Sir,—I have looked in vain in numerous medical works for a satisfactory account of this affection, and have been led to suppose it a comparatively new disease, from the silence of so many standard systematic authors respecting it. Noticing lately in one or two of our periodicals, some allusions to it, with something of a learnedly imposing essay on its pathology, and quite a formidable formula for its treatment, I have been induced to offer the results of my experience in its treatment, in the hope that some valuable lives may be spared, and very much of personal discomfort obviated, by an observance of my suggestions.

And my purpose in this communication is simply to say, without making "an article," that *every case* I have treated has yielded, within forty-eight hours, to the use of iodide of potash in gr. v. doses three times a day. I have sometimes exhibited it in the Guaicum decoction (decoction of the woods) and sometimes in sarsaparilla syrup; probably if given in simple syrup the result would be the same. Some of the cases were exceedingly obstinate and severe. One lady had been obliged to wean four or five children successively, immediately after, or within a few weeks of their birth, and all had tried without success, nearly every remedy known. Without propounding any theory of the pathology of the disease or modus operandi of the medicine, I feel persuaded that the one is as near being a specific for the other, as can well be conceived.

Henry D. Holt, M. D.

New York, April, 1848.

"THE JERKS."

A singular nervous affection has at times appeared in some parts of our Western country, analogous to that described by Hecker, in his work on the "Epidemics of the Middle Ages," under the name of "Tarantula," or "Dancing Mania." As the disease is said to be met with occasionally, no apology will be needed for copying from the Ohio Historical Collections the following graphic description of it.—Ed.

"In 1803, Austinburg, Morgan and Harpersfield experienced a revival of religion, by which about thirty-five from those places united with the church at Austinburg. This revival was attended with the phenomena of "*bodily exercises*," then common in the West. They have been classified by a clerical writer, as, 1st, the *falling exercise;* 2d, the *jerking exercise;* 3d, the *rolling exercise;* 4th, the *running exercise;* 5th, the *dancing exercise;* 6th, the *barking exercise;* 7th, the *visions and trances.* We make room for an extract from his account of the second of the series, which sufficiently characterizes the remainder.

"It was familiarly called the *jerks*, and the first recorded instance of its occurrence was in East Tennessee, where several hundred of both sexes were seized with this strange and involuntary contortion. The subject was instantaneously seized with spasms or convulsions in every muscle, nerve, and tendon. His head was thrown or jerked from side to side with such rapidity that it was impossible to distinguish his visage; and the most lively fears were awakened lest he should dislocate his neck, or dash out his brains. His body partook of the same impulse, and was hurried on by like jerks, over every obstacle, fallen trunks of trees, or in a church, over pews and benches, apparently to the most imminent danger of being bruised or mangled. It was useless to attempt to hold or restrain him, and the paroxism was permitted gradually to exhaust itself. An additional motive for leaving him to himself was the superstitious notion that all attempt at restraint was resisting the Spirit of God.

"The first form in which these spasmodic contortions made their appearance was that of a simple jerking of the arms from the elbows downwards. The jerk was very quick and sudden, and followed with short intervals. This was the simplest and most common form, but the convulsive motion was not confined to the arms, it extended in many instances to other parts of the body. When the joint of the neck was affected, the head was thrown backward and forward with a celerity frightful to behold, and which was impossible to be imitated by persons who were not under the same stimulus. The bosom heaved, the countenance was disgustingly distorted, and the spectators were alarmed lest the neck should be broken. When the hair was long, it was shaken with such quickness, backward and forward, as to crack and snap like the lash of a whip. Sometimes the muscles of the back were affected, and the patient was thrown down on the ground, when his contortions for some time resembled those of a live fish, cast from its native element on the land."

The most graphic description we have, is from one who was not only an eye witness, but an apologist. He says, "Nothing in nature could better represent this strange and unaccountable operation, than for one to goad another, alternately on every side, with a piece of red hot iron. The exercise commonly began in the head, which would fly backward and forward, and from side to side, with a quick jolt, which the person would naturally labor to suppress, but in vain; and the more any one labored to stay himself and be sober, the more he staggered and the more his twitches increased. He must necessarily go as he was inclined, whether with a violent dash on the ground, and bounce from place to place like a foot ball, or hop round with head, limbs or trunk twitching and jolting in every direction, as if they must inevitably fly asunder. And how such could escape without injury was no small wonder among spectators. By this strange operation the human form was commonly so transformed and disfigured, as to lose every trace of its natural appearance. Sometimes the head would be twitched right and left, to a half round, with such velocity, and in the quick progressive jerk, it would seem as if the person was transmuted into some other species of creatures. Head dresses were of but little account among the female jerkers. Even handkerchiefs bound tight round the head would be flirted off almost with the first twitch, and the hair put in the utmost confusion: this was a very great inconvenience, to redress which the generality were shorn, though directly contrary to their confession of faith. Such as were seized with the jerks, were wrested at once, not only from under their own government, but that of every one else, so that it was dangerous to attempt confining them or touching them in any manner, to whatever danger they were exposed, yet few were hurt, except it were such as rebelled against the operation, through wilful and deliberate enmity, and refused to comply with the injunctions which it came to enforce.

From the universal testimony of those who have described these spasms, they appear to have been wholly involuntary. This remark is applicable also to all the other bodily exercises. What demonstrates satisfactorily their involuntary nature is, not only that, as above stated, the twitches prevail in spite of resistance, and even more for attempts to suppress them; but that wicked men would be seized with them while sedulously guarding against an attack, and cursing every jerk when made. Travellers on their journey, and laborers at their daily work, were also liable to them."

THE SYDENHAM SOCIETY.—We have received the Fifth Report of the Sydenham Society of England, by which we learn that the Society continues to flourish, and to carry out successfully the objects for which it was established.

The works thus far published, are as follows:

First Year, (1843–4.)—*Hecker's Epidemics of the Middle Ages*, 1 vol.; *Lewis on Phthisis*, 1 do.; *Sydenham's Works*, 1 do.

Second Year, (1844–5.)—*Paulus Æginetæ*, vol. 1; *Observations on Aneurism*, 1 vol.; *Simon's Animal Chemistry*, 1 do.

Third Year, (1845–6.)—*Simon's Animal Chemistry*, 1 vol.—(vol. 2;) *Paulus Æginetæ*, 1 vol.; *Hasse's Pathology*, 1 do.

Fourth Year, (1846–7.)—*Works of W. Hewson*, 1 vol.; *Dupuytren's Lectures*, 1 vol.; *Harvey's Works*, 1 do.

Fifth Year, (1847–8.)—*Paulus Æginetæ*, 1 vol.; *Feuchtersleben Medical Psychology*.

These 14 volumes have cost the publishers in this country about $30, including freight, &c. They are all large octavo volumes, beautifully got up, and are worth far more than their cost, as most of them cannot be obtained except through the Society. A complete edition of the works of Hippocrates, in English, is in the course of publication; also, a volume on Medical Ethics, and on Medical Bibliography. Subscriptions may be sent to the Editor of this journal, or to Mr. John Wiley, Publisher, Broadway, New-York. Terms, $5 per year.

"JARVIS'S SURGICAL ADJUSTER."

We have respectfully called the attention of our readers to the merits of the "Surgical Adjuster" of Dr. Jarvis, an instrument now introduced into the French and British hospitals, and extensively employed both in Europe and the United States. From the following report of the Army Medical Board, it will be seen that it is now recommended to be introduced into the army, as it has already, to considerable extent, been, into the naval service.—(Ed. N. Y. Jour.)

(COPY.)

SPECIAL REPORT OF THE ARMY MEDICAL BOARD ON JARVIS'S SURGICAL ADJUSTER.

The Army Medical Board, consisting of Surgeons Finley, Stinnecke and Assistant Surgeon Southgate, to whom was referred the petition of Mr. Kellogg, addressed to the Hon. Sec. of War, praying that Jarvis's Surgical Adjuster might be furnished to the Army of the U. S., have the honor to report, that an examination of the instrument has satisfied them of its adaptation to the treatment of Fractures and Dislocations. The facility with which extension may be applied in a gentle and continuous manner, and instantly intermitted without losing the effect produced, and the ease with which the limb may be manipulated, render it an admirable resource in dislocations which have continued unreduced from unskilfully directed efforts, or the absence of surgical aid, as well as in those which occasionally, under the best management, resist the means applied.

The Board are likewise of the opinion, that it will prove an excellent means of treating fracture of the neck, of the thigh bone; an accident, the treatment of which is too often followed by unsatisfactory results.

Whilst the Board take pleasure in testifying to the value of the invention, and admire it as a happy application of American ingenuity to the relief of human suffering, they are of the opinion, that a very large proportion of fractures and dislocations may be satisfactorily treated by the means and appliances usually resorted to; and at our Military Posts, when well directed surgical aid is immediately rendered on the receipt of the injury, such an instrument will be seldom called for. So high an opinion, however, does the Board entertain of it, as a reliahle means of relief in cases which may occasionally present themselves, that they would respectfully suggest to the Surgeon General, whether it may not be expedient to furnish the instrument to some of our large Military Stations, and to each division of our army in the field.

Respectfully submitted by direction of the Board.
(Signed) Robert Southgate, Assistant Surgeon, U. S. A.
Thomas Lawson, Surgeon General, Washington, D. C.
New York, May 25, 1847.

New Albany, Indiana, April 13, 1848.

Dear Sir,—In a late number of the New-York Journal of Medicine, if I mistake not, you requested the members of our profession to give you brief notices of their observations on the medical effects of indigenous plants. You will therefore excuse my calling your attention to these two.

1. Geraneum Maculatum. Some ten or twelve years since, having under my care a patient suffering severely from mercurial ptyalism, which refused to yield to the ordinary remedies, and remembering that the infusion of this plant was used with great advantage in ophthus ulcers, I supposed it might be of use in the present case. I accordingly used it freely as a lotion, with very speedy and entire relief. I have subsequently used it with great benefit in similar cases.

2. Convolvulus Panduratus. This plant has not received that attention to which, in my opinion, it is entitled, or it has in the hands of others produced effects much less important than has fallen to my lot to observe. It is by some said to be feebly cathartic. When I have used it as a cathartic, it has failed entirely. It is also mentioned as being, by possibility, somewhat diuretic. When given freely in infusion, I have found it to produce more decided diuretic action than any other single article which I have ever used. It is much used in some parts of New Jersey as a domestic remedy for this purpose.

George M. Maclean.

Medical Department of Transylvania University, Session of 1847–8.—We learn, from a Catalogue of this Institution, recently received, that 167 students attended the last course of lectures, of whom 50 graduated. We are rejoiced to learn of the continued prosperity of this highly respectable school of Medicine, and trust it may continue to send forth its graduates, prepared to encounter successfully every form of disease.

Pennsylvania Medical Convention.—On the 11th instant this body met at Lancaster; it was well attended, and was an occasion of much interest. A constitution for the organization of a State Medical Society was adopted, officers elected, and delegates appointed to attend the ensuing meeting of the National Medical Association. The best feeling prevailed, and the interest felt in this important movement promises well for the future prospects of the new Society. It adjourned to meet at the same time next year in the city of Reading.—*New Jersey Med. and Surg. Reporter.*

Resolutions adopted by the Philadelphia College of Physicians, in testimony of their respect for their late President, Dr. Hewson.

Resolved, That it was with profound regret that the College learned the melancholy fact of the decease of their late revered President, Thomas T. Hewson, M. D.

Resolved, That the demise of this gentleman, who was not less distinguished by his attainments in medicine, in literature, and in science generally, than by the amenity of his disposition, the urbanity of his deportment, and the uprightness of his entire life, is an event deeply to be deplored by the members of this institution, with which he was connected during forty-six years, and over whose deliberations he presided for the last twelve years.

Resolved, That one of the Fellows be appointed to prepare a memoir of our late President and colleague, to be read before the College.

Resolved, That a committee be appointed to prepare a letter expressive of the condolence of this College with the family of the deceased.

Dr. Franklin Beck was appointed to prepare the memoir of Dr. Hewson; and Drs. Wood, C. D. Meigs, and Bond, to carry out the provisions of the last resolution.—*Med. News.*

From the Albany Evening Journal.

BIRTHS, MARRIAGES, AND DEATHS.

Secretary's Office, April 10, 1848.

Dear Sir,—Having just completed the several tables for a report of Births, Marriages, and Deaths, to be made to the Legislature, in pursuance of the act of April 28, 1847, in which duty Mr. J. Cuyler was associated with me, I thought it might not be uninteresting to the readers of your paper, to give a few general results gleaned from them. I would, however, remark, that as this is the first report made under the law referred to, the reports from the several counties in the State are not as full and complete as could be wished, and unfortunately, owing to an omission in the law, the several cities in the State are in fact excluded from its operation, and no reports have, consequently, been received from them, except a partial one from the city of New-York. The law makes it the duty of "The Clerks of the several School Districts of this State, organized according to law, and where there shall be no Clerk, or he shall be incapable of acting, the Trustees, or one of them, of such District, shall, annually, on or before the 15th day of January in each year, ascertain, from the most accurate means of information in their power, and report in writing to the Town Clerk of the town, or one of the Aldermen of the ward," &c. There being no Clerks or Trustees of School Districts in the several cities, there were, consequently, no officers on whom devolved the duty of collecting the information necessary for this report.

Of the whole number of Marriages, 898 were in the month of January; 841 in February; 820 in March; 612 in April; 701 in May; 730 in June; 942 in July; 770 in August; 1,238 in September; 1,354 in October; 1,151 in November; 1,348 in December.

Of the ages of the persons married, 3,338 were under 20 years; 8,383 between 20 and 25; 4,292 between 25 and 30; 1,300 between 30 and 35; 753 between 35 and 40; 415 between 40 and 45; 260 between 45 and 50; 178 between 50 and 55; 113 between 55 and 60; 74 between 60 and 65; 119 between 60 and 70; 8 over 70; 3,641, ages not given.

The greatest number of marriages took place during the months of September, October, November, and December. 8,383 were married between the ages of 20 and 25.

Total number of births, from January 1, 1847, to January 1, 1848, 35,897; marriages, 11,437; deaths, 17,263.

Of the whole number of births, 2,327 took place in January; 2,501 in February; 3,079 in March; 3,000 in April; 2,974 in May; 2,860 in June: 3,243 in July; 3,370 in August; 3,301 in September; 3,202 in October; 2,910 in November; 3,016 in December; 83, month not given. Of the sex, 18,722 were males; 16,988 females; 187 not given. Of the complexion, 18,155 white males; 16,580 females; 243 black males; 225 females; 695 complexion not given. Of twins, there were 15 pair reported; of illegitimate children, there were 118 reported.

The greatest number of births took place in the month of August, viz.: 3,370; the smallest number in the month of January, 2,327.

Of the whole number of deaths, 1,032 were in the month of January; 1,158 in February; 1,443 in March; 1,327 in April; 1,239 in May; 1,246 in June; 1,447 in July; 1,870 in August; 1,984 in September; 1,623 in October; 1,335 in November; 1,513 in December; 46, month not given.

Of the sex of those dying, 8,613 were males; 8,575 were females; 75, sex not given.

Of the complexion of those dying, 8,157 were white males; 8,121 were white females; 190 were black males; 204 were black females; 591, complexion not given.

Of the condition in life of those dying, 3,352 males were married; 2,917 females were married; 5,400 males were unmarried; 4,318 females were unmarried; 1,276, condition in life not given.

The greatest number of deaths took place during the months of August, September, and October.

The ages of those dying, were:

	Males.	Females.	Total.
Under 1 year	1033	833	1866
1 to 2 years	590	584	1174
2 to 5 “	818	723	1541
5 to 10 “	418	407	825
10 to 15 “	211	236	447
15 to 20 “	276	432	708
20 to 25 “	431	537	968
25 to 30 “	390	445	835
30 to 40 “	535	672	1207
40 to 50 “	494	514	1008
50 to 60 “	502	445	947
60 to 70 “	508	503	1011
70 to 80 “	579	546	1125
80 to 90 “	391	295	686
90 to 100 “	89	71	160
100 years and upwards	15	12	27
Age not given	..	..	755

Of the diseases reported, the following are (amid a multitude of others) the most fatal: Consumption, Dysentery, Inflammation of the Lungs, Dropsy, Croup, and Scarlet Fever, of which consumption is by far the worst.

The average ages of the several occupations of life are as follows: Clergymen, 56 years; Lawyers, 44 do; Physicians, 51 do; Farmers, 57 do. The remainder of the occupations are too numerous, and cannot be stated here, but will be found in full in the report, when published.

M. L. Schermerhorn.

CASE OF ABSCESS NEAR THE AXILLA—TERMINATING WITH PROFUSE HÆMORRHAGE.

I was requested to see a little girl four years old, with pain in her left arm. The upper third of the arm was very tender, upon pressure, but without any external evidence of inflammation. Upon taking hold of the limb and attempting to move it, the child would scream vehemently. The arm was held near to the side, the fore-arm thrown across the epigastrium, and the shoulder depressed, as in fracture of the collar bone. I could discover no evidence of fracture or dislocation. Rest and saturnine lotions were ordered. In three or four days a little redness appeared about an inch and a half below the axilla, under the arm. Poultices were directed—the child became pale and wan—laid in its cradle, and took but little nourishment. The whole of the upper part of the limb became inflamed, and at the point where the first red spot appeared it began to soften; fluctuation was very apparent, and I was urged by the mother to open it. This I declined doing, without assigning any reason, and, indeed, without having any, except a disinclination to do so. Soon after leaving the house, I began to reflect whether I should not have done so, knowing that it would be followed by relief to my little patient. I hesitated, and was almost ready to turn back, to comply with the reasonable request of the mother. On my visit the next morning, the mother accosted me thus: "Doctor, you must lance this place; indeed you must." It was examined thoroughly, and was evidently fit to open. I had left my case at home, and could not do it. The child suffered intensely, and the mother had been nearly worn out with twelve days of watching and anxiety. The poultices were continued, anodynes were administered, and nourishing food directed. In the afternoon I was sent for in great haste. Not being at home at the time, I did not receive the message for an hour after it was left. On my return I went to the little sufferer; she lay pale, cold, and nearly pulseless, from excessive hæmorrhage. The abscess had broken, and when the discharge occurred, as the mother states, she attempted to raise her arm, and the blood jetted out in a stream, several feet across the room. Pressure was made above the orifice with the finger, the applications all removed, the arm made bare, and covered again with towels wet with cold water. Brandy and chicken broth were administered, but the stomach rejected them. Resort was then had to injections of beef tea, and sinapisms to the extremities. Carb. ammon. in emuls: amygdal: was administered, and retained. The pulse rose a little, and after tone was restored in some measure to the stomach, brandy and water were freely given. I deemed it useless to attempt to secure the artery, as the screams and struggles of the child might have increased the hæmorrhage, and as the orifice was too small to enter with the tenaculum or needle, without a further division. Reliance was placed on the cold affusions, and perfect rest—they were sufficient. By pursuing this plan for several days, re-action was restored, and the patient is now recovering. Much thick and offensive matter was thrown off from the tumor, and continues, to some extent, at this time. The swelling has entirely subsided, and there remains an inability to extend the fore-arm from contraction of the biceps muscle, the radial tendon of which rises distinctly into the bend of the arm, when the extensor muscles attempt to act. The substance of the biceps muscles, and the coats of some one of the important branches of the brachial artery must have been embraced within the sphere of the suppurative action, and suffered a dissolution during its progress, in order to give rise to the results which followed. Had the abscess been penetrated by the lancet, the hæmorrhage would, no doubt, have been attributed to its use; and had the patient died, the reflections of the operator must certainly have been very unsatisfactory.—*N. J. Med. and Surg. Rep.*

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New Liquid Adhesive Plaster.—We have been shown by a young medical student, Mr. John. P. Maynard, of Boston, a liquid adhesive substance, which he has introduced as a substitute for the common adhesive plaster, and over which it seems to us to possess many advantages, and to be applicable to many cases in which the latter is not. It is formed by treating cotton with nitric and sulphuric acids, then washing the substance thoroughly, and afterwards dissolving it in pure sulphuric ether.

In a letter to Dr. John D. Fisher, read before the Boston Society for Medical Improvements, (published in *Boston Med. and Surg. Journ.*, March 29th,) Mr. Maynard states that he has used the adhesive liquid, and seen it used by his preceptor, Dr. Whitney, in more than one hundred cases of surgery, some of them serious, and in all successfully.

"The mode," Mr. Maynard states, "in which it was used in these cases, varied according to the nature, size and situation of the wound. In slight cuts, a moderately thick coating of the solution laid over the incised parts was, on becoming dry, sufficient to keep the lips of the wound in position till union took place; but in most instances it was employed in conjunction with straps of cotton and sheep-skin, and with raw cotton, forming with them strong, unyielding, adhesive straps, bandages and encasements; and after many experiments, I am convinced that this is the best and most effectual way in which it can be employed as an adhesive agent in surgery. The solution dries rapidly, and in a few seconds, by the evaporation of the ether it contains, it becomes solid and impermeable to water—and a strap moistened with it and glued to any part of the cutaneous surface, adheres to it with a tenacity that is truly surprising.

"In proof of this, I will mention the following facts. A strap of sheep skin, glued to the hand by a thin layer of the solution, nine lines long and one and a half wide, sustained a weight of two pounds. A second strap, attached to the hand by a layer of the substance, nine lines in length and three in width, sustained a weight of three pounds. A third strap, fixed to the hand by a layer of the liquid, twelve lines square, resisted the force of ten pounds without giving way; and a fourth strap of the leather, glued to the hand by a stratum of the solution, measuring one and three-fourths of an inch in length and one in width, was not separated from its attachment by the gravity of twenty pounds! These statements may appear incredible; but they are founded on exact and carefully-performed experiments, and are true. No other known gum possesses such adhesive power as these experiments show this cotton gum to be endowed with. No adhesive plaster hitherto used in surgery is to be compared to it in this respect. It therefore can be made use of in cases in which the common adhesive plaster would be useless.

"The wonderful adhesive properties which my experiments proved it to possess, suggested the thought that it might answer the purpose of sutures in surgery. And an opportunity soon occurred to enable me to decide the fact that it would. I allude to the operation performed by Dr. Whitney, for the removal of a wen from the head. Fearing that an erysipelatous inflammation might arise in the scalp, in case he united the divided parts by sutures, Dr. W. shaved the hair from the raised scalp, and by means of the cotton solution he glued some short and narrow straps of sheep-skin on each flap, a short distance from their edge. These straps were then drawn towards each other until the edges of the wound were brought into close and exact union, and the free ends of the straps were fastened together by sutures. In this case the needle and thread were passed through inanimate leather instead of living flesh, causing no pain to the patient and no interruption of the process of healing. The wound healed favorably, and without the usual accidents necessarily occasioned by the presence of sutures in, and the operations for their removal from the parts. The happy result of this case convinced me that a means was now discovered which would enable the surgeon to do away with sutures, pins and needles, in most of the cases in which these are at present considered indispensable.

"Although unauthorized to do so, I must take the liberty, in this place, to mention the interesting fact that Dr. Comstock, of Wrentham, has recently employed this liquid as a dressing in a case of extensive laceration of the perineum, with a success that he thinks never attended any other mode of management. The dressings remained firmly attached and solid during the process of healing, notwithstanding they were for a time almost constantly covered by urine and mucus, and subject to being displaced by the movement of the patient."—*American Jour. Med. Sciences.*

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Report of the principal facts connected with a fatal case of Chloroform Inhalation, which occurred in Cincinnati.—The subject of the following report, Mrs. Martha G. Simmons, was, at the time of her decease, thirty-five years and ten months old. Her husband states that she generally enjoyed excellent health; sometimes she was "nervous," and suffered occasionally with neuralgic pains about the face, and pain in the ear, apparently arising from decayed teeth. She also suffered at times from "sick headache." She was the mother of six children, five of whom are still living; her last accouchement occurred eight weeks previous to her death. Nothing unusual occurred, either at the time of parturition or subsequently; her health remained good, and the ordinary quantity of milk was secreted.

On the 23d of February, she dined at a quarter past 12 o'clock, and after dinner walked to a dentist's, a distance of about three-fourths of a mile, for the purpose of having some roots of teeth extracted. She arrived at the dentist's 15 minutes before 3 o'clock, appeared slightly flushed from the exercise of walking, but exhibited no alarm on account of inhaling the chloroform.

At 3 o'clock, 15 minutes after her arrival, Mrs. S. commenced inhaling chloroform. Mrs. Pearson, and Mrs. Cross, two female friends, were present, and report the following as the events which occurred: The respiratory movements appeared to be free—chest heaving. While inhaling, *the face became pale.* At the expiration of about *one minute*, the instruments were applied, and four roots of teeth extracted. The patient groaned, and manifested what they regarded as evidences of pain, while the teeth were being extracted, although she did not speak, or exhibit any other sign of consciousness. As the last root came out—which was about two minutes from the beginning of the inhalation—patient's head turned to one side, arms became slightly rigid, body drawn somewhat backwards, with a tendency to slide from the operating chair. At this instant, Mrs. Pearson states that she placed her finger upon the patient's pulse, observed that it was feeble, and immediately ceased to beat; respiration also ceased *about* the same time. The face, which was previously pale, now became livid, as also did the finger nails; the lower jaw dropped, and the tongue projected a little at one corner of the mouth, and the arms were perfectly relaxed. The females regarded her as being then quite dead. Efforts were made to resuscitate the patient—ammonia was applied to the nostrils, cold water dashed in the face, mustard, brandy, &c., applied. The patient was now removed from the operating chair, and laid on a sofa; but she did not breathe, nor exhibit any sign of life, after being placed in the recumbent position.

Messrs. Meredith and Sexton, the dentists who operated in the above case, make the following statement:—The patient took the chloroform vapor from Morton's inhaler; it contained a sponge (perhaps one-third filling the glass globe of 4½ inches diameter,) saturated with the liquid; to this 25 drops more were added when the patient began inhaling. Breathing at first slow; inhaled 12 or 15 times, occupying from a minute to 75 seconds. One of the dentists thinks she remained about *ten* minutes in the operating chair, and that life was not extinct till the end of that time; the other estimates the time at *five* minutes. One says he does not know whether she breathed after being laid on the sofa, or not; the other thinks she did not.

After the patient was laid on the sofa, medical aid was sought, and Dr. A. H. Baker was the first physician who arrived; this was probably thirty minutes after respiration had ceased. He immediately pronounced her dead, but proceeded to employ vigorous measures for her resuscitation. The principal means employed consisted in artificial respiration, electro-magnetism, and external stimulants. Prof. Locke applied electro-magnetism, which caused active muscular contraction, but no evident effect on the heart. About an hour after the accident, Profs. Mussey and Lawson arrived, and aided in the further employment of the means above specified. Not the slightest sign of life was manifested after the arrival of Dr. Baker; the heart did not respond to the electricity, and the only change produced was some slight removal of the lividity of the countenance by the artificial respiration.

The *post-mortem examination* was made twenty-six hours after death. Present—Drs. Mussey, Lawson, and Mulford.

Examination by Dr. Lawson. Record by Dr. Mussey.

External Appearances.—Lips livid, but face pale; bloody froth issuing from the mouth. Anterior surface of body and limbs free from discoloration, but posteriorly the skin presented a deep livid hue. Cornea dull and flaccid, and a dull-red horizontal belt extended across each eye, corresponding to the part which was unprotected by the lids; this belt was one-tenth of an inch in diameter, and made its appearance a few hours after death. Limbs quite rigid. Abdomen distended with gas. Patient rather muscular; weight probably from 140 to 150 pounds; hair dark; eyes dark brown; temperament, sanguineo-bilious.

Brain.—Integuments contained but little blood. On removing the upper part of the skull, a larger quantity of blood than usual flowed from the vessels of the dura mater. Superficial vessels of the brain moderately distended; two or three ounces of fluid blood, intermixed with bubbles of air, flowed from the sinuses of the dura mater. General aspect, color, and consistence of the brain, normal.

Lungs.—Considerably but not intensely congested; crepitated freely at all points; no extravasation. Lining membrane of bronchia slightly congested, apparently the result of recent catarrh; deeply stained by the blood. Pleura at all points highly injected; six drachms bloody serum in the right, and two ounces in the left chest.

Heart and large Blood-Vessels.—Pericardium contained six drachms of bloody serum. Heart flaccid, *and all its cavities entirely empty;* inner surface of both ventricles and auricles deeply stained. Aorta and pulmonary artery empty; no blood in the cava within the chest, and a very small quantity in the part which lies within the abdomen; indeed, so small was the amount, that it could not be appreciated until the vessel was opened. Lining membrane of all the blood-vessels deeply stained.

Abdomen.—One ounce and a half of bloody serum in the right hypochondrium. Stomach and intestines distended with gas. Partially digested aliment, amounting to about three gills, was found in the stomach. Liver paler than usual, arising from the absence of blood; kidney considerably engorged. No marks of previous disease in any of the abdominal organs. Uterus and bladder normal; the former exhibited the usual condition of the organ two months after delivery.

Blood.—Fluid as water, in every part of the body; not a coagulum was seen in any vessel. Examined with the microscope, the globules appeared altered somewhat in form; some were irregular in shape, and they seemed generally distended and more globular than is normal; they were also somewhat fragmentary, a part apparently having been ruptured; their number seemed somewhat diminished. The color, in every part of the system, was that of dark venous blood.

Sympathetic Nerve.—The sympathetic nerve, together with its larger ganglia, including the semilunar ganglion, presented a natural color.

The Chloroform used.—The specific gravity of the chloroform employed was found to be 1.3. It contained some alcohol, but upon the whole is regarded as a fair article. It was the same which the dentists had previously used in numerous cases, without any unpleasant results.—*The Western Lancet and Hospital Reporter*, March, 1848.

MUNIFICENT CONTRIBUTION TO MEDICAL EDUCATION.

Some twelve or fourteen years ago, a medical school was commenced under the name of Willoughby University, in the humble village of Chagrin, now Willoughby, eighteen miles from Cleveland, Ohio, on the banks of Lake Erie. A few years since, most of the Faculty left it for the more eligible city just named. Their places were supplied by others, who, however, soon felt the disadvantages of the position; and, with the sanction of their trustees and the Legislature of Ohio, they transferred the institution to Columbus, the seat of government. There it attracted the regard of LYNE STARLING, Esq., an old and respected citizen, formerly of Kentucky, who during the past winter made to it the liberal donation of THIRTY THOUSAND DOLLARS—two thirds to be expended in the erection of a college edifice, and one third in founding a hospital for clinical instruction. It gives us great pleasure to record this act of liberality, and we trust that all our readers will honor the name of Starling, as those to whom the money was given have done; for by an alteration in the charter, the school is henceforth to be entitled The Starling Medical College.

With the aid of this ample endowment, we trust the Faculty will venture to advance the price of their tickets, which is now only eight dollars each. We would not insist, that in a region where the charges of physicians are lower than in many other parts of the country, they should be required, while studying, to pay the highest price for their tickets; but that just named is too low, and ought to be advanced to twelve dollars at least. Such an advance is due to the benefactor of the College.

The annual announcement, from which we have obtained the foregoing particulars, presents a catalogue of one hundred and thirty-eight pupils, of which twenty-five, or about eighteen per cent., are marked as practitioners. This number struck us as large, and taking up the Catalogue of the University of Louisville, we found that the whole number thus marked was, in four hundred and six, but sixteen, or a fraction less than four per cent. If a great number of these physicians of Ohio have gone into practice before graduating, it is cheering to find that so many have not lost sight of the duty of perfecting their university education. We hear much from the people about the great number annually graduated by our school; but they ought rather to dread the still greater number who engage in practical duties without graduating—many, indeed, notwithstanding the great number of schools, without attending a single course of lectures in any.—*Western Journal.*

CASES OF HÆMORRHAGE FROM THE UMBILICUS.

BY ELIAS J. MARSH, M. D.

In the course of my practice, I have met with two fatal cases, and several very slight ones, of a disease not usually noticed in the books of practice which have fallen under my notice. The disease is hæmorrhage from the umbilicus, after the separation of the cord. In the fatal cases of which I speak, compression, astringents, and escharotics were employed, but to no good purpose; in one case, the twisted suture was used by a physician, but with the same result. Local applications, mild and severe, appeared to have no control over the hæmorrhage. In these cases, the skin and conjunctiva assumed a deep icteric hue; it was not the usual *icturus mentarum*, which probably depends upon some change in the condition of the blood in the cutaneous capillaries, but a true jaundice.

I attribute the disease to some obstruction in the liver, which prevents the normal circulation of the blood throughout that viscus, and forces that fluid in a refluent course through the unobliterated umbilical vessels. Acting upon these pathological views, in one or two slight cases of similar hæmorrhage, I have adopted the practice of free purging, with apparent good effect; whether it would answer in the severer forms of the disease, I cannot say, but it may be worth the trial, as local applications are entirely useless. As the disease appears to be of rare occurrence, I have thought that this brief notice may not be without interest to some of your readers.—*New Jersey Med. and Surg. Reporter.*

Paterson, March, 1848.

Medical Classes, Session of 1847–8.—The number of Matriculants in the Medical Department of the University of Pennsylvania, as shown by the catalogue, was 508, of which 47 were graduates of this, and 18 of other institutions.

The catalogue of the Jefferson Medical College contains the names of 480 as attending the lectures, of whom 58 were graduates.

The class of the Medical Department of the University of Louisville, according to the catalogue, numbered 406, of whom 13 were graduates.

The number of the class of Starling Medical College, (Columbus,) as given in the catalogue, was 138, of which 4 were graduates.

Remuneration of Medical Men in Canada, for attendance on Fever Cases.—The British government have ordered that the scale of remuneration to physicians for attendance on the fever hospitals in Canada should be lowered to twenty-five shillings a day,—that every physician should attend two hundred patients, and that only two nurses should be allowed to every hundred patients. We have before noticed the low estimate placed by the British government upon medical services; and if the profession of Canada submit to this insulting treatment, in a little while their remuneration will be reduced to the sum allowed by the government to physicians in Ireland, "five shillings a day!"

The *London Times* contains the following just remarks on the present system of remunerating poor-law medical officers:

> "There can, however, be no doubt of the entire hopelessness of the attempt to provide for the medical relief of the poor by paying for it at the lowest rate at which it is tendered. Nothing can be supplied honestly and permanently for less than it is worth, and with the skill of the professional man, as with the commodities of the tradesman, underselling must either be carried on by fraud, or be brought to an end by ruin. Parochial surgeons must be properly paid before parochial patients can be properly attended; for in nineteen cases out of twenty a desire to prove by experiment the very cheapest rate at which a duty may be performed, ends in ascertaining the highest cost at which it may be neglected. It is folly to expect liberal and generous conduct in return for mean and shabby treatment."

Medical Convention of the State of South Carolina.—In compliance with the call of the Medical Society of the State of South Carolina, a Convention of the Physicians of the State convened in Charleston, on the 14th of February last.

The following officers were elected:

President.—Dr. James Moultrie, of Charleston.

Vice Presidents.—Dr. C. Ready, of Edgefield, Dr. Isaac Branch, of Abbeville.

Secretaries.—Dr. D. J. C. Cain, of Charleston, Dr. R. Johnson, of Camden.

The Convention was then organized, and proceeded to business.

On motion of Dr. T. Y. Simons, it was

Resolved, That a Committee of five be appointed, to report on the recommendation of the National Medical Convention, to the Medical Profession, to use their influence to have established in their respective States a Registration of Births, Marriages, and Deaths.

Committee.—Drs. Simons, Dendy, Youngblood, Fair, and Keith.

On motion of Dr. Jervey, it was

Resolved, That it is both desirable and necessary that all young men who may hereafter apply to be received as Students of Medicine, should have obtained a proper and suitable preparatory education, and that a Committee of five be appointed to report on the standard of requirements proper to be exacted from such applicants.

Committee—Drs. Jervey, Mabry, Shuler, Easterling, and Sims.

On motion of Dr. Wragg, it was

Resolved, That a Committee of five be appointed for the purpose of reporting on the best means of discouraging druggists who are in the habit of vending patent medicines and nostrums.

Committee—Drs. Wragg, Gilbert, McKain, Canther, and McKewn.

Dr. Wragg laid before the Convention a circular from the College of Pharmacy of New-York, which was read by the Secretary, and referred to the Committee on Druggists.

Dr. Elias Horlbeck, of Charleston, then offered the following Preamble and Resolution:

Whereas the members of the Medical Profession of the State of South Carolina are assembled on this occasion for the general purpose of advancing the character and usefulness of this calling, as well as for other objects more particularly set forth in the circular of the Medical Society of this city, and whereas it has been ascertained by experience that the united and concerted action of individuals engaged in similar pursuits facilitates the accomplishment of their ends—therefore be it

Resolved, That in order to the more successful attainment of the objects for which it has assembled, this Convention do proceed to establish a State Medical Association, and that a Committee of five members be nominated to report a Constitution and By-laws for its permanent organization.

Dr. Wragg moved that the Committee retire and report as soon as they are ready.

On motion of Dr. Elfe, the Convention took a recess for half an hour.

The Convention re-assembled at half past one o'clock.

The President inquired whether any of the Committees were ready to report.

Whereupon Dr. Jervey submitted a report from the Committee on Preliminary Education, with the following resolutions:

1st. *Resolved*, That this Convention earnestly recommends to the members of the Medical profession throughout the State of South Carolina, to satisfy themselves, either by personal inquiry or written certificate from competent persons, that all young men who may hereafter apply for admission into their offices as students, shall be of good moral character, and shall have acquired a *good English education*, a knowledge of natural philosophy and the elementary mathematical sciences, and such an acquaintance, at least, with the Latin and Greek languages as will enable them to appreciate the technical language of medicine, and read and write prescriptions.

2d. *Resolved*, That this Convention also recommends to the members of the Medical profession of the State of South Carolina, when they shall have satisfied themselves that a young man possesses the qualifications specified in the preceding resolution, to give him a written certificate, stating that fact, and recording also the date of his admission as a Medical Student, to be carried with him as a warrant for his reception into the Medical College in which he may intend to pursue his studies.

3d. *Resolved*, That the Medical College of the State of South Carolina be, and it is respectfully recommended and requested, to give its aid and assistance in establishing the above requisitions, by demanding such a certificate from every Student of medicine, who may hereafter apply for matriculation; and when publishing its annual list of graduates, to accompany the name of the graduate with the name and residence of his preceptor, the name of the latter being clearly and distinctly presented as certifying to the necessary and required preliminary education.

Dr. De Saussure moved that the report be accepted, and 100 copies be printed for distribution and consideration to-morrow.

Dr. Horlbeck submitted a report from the Committee on the By-Laws of the South Carolina Medical Association.

Dr. Gadsden moved that the report be accepted, and 200 copies be printed for consideration to-morrow. Adopted.

Dr. Wragg submitted a report from the Committee on Druggists, with the following resolutions:

1st. *Resolved*, That in our transactions with Apothecaries, we will deal exclusively with those who abstain from recommending and vending quack or patented medicines, whenever we have the option.

2d. *Resolved*, That in writing prescriptions for our patients, or in directing them where to obtain any articles connected with the treatment of their diseases, of which they may stand in need, we will always recommend them to those Apothecaries alluded to in the first resolution; and further, that we will use our influence with our patients and all our unprofessional friends, in inducing them to deal at such drug stores.

3d. *Resolved*, That each member of the Convention pledges himself to report to the South Carolina Medical Association, or to one of the branches contemplated to be formed by this Convention, at a regular meeting, all cases coming under his own observation, or reported to him on credible authority, of mistakes committed, or injury inflicted, through the ignorance or carelessness of Apothecaries or their clerks; and that these facts be made use of by the Society in any way it may think best calculated to act on the community towards the end we have in view.

4th. *Resolved*, That the following letter, or one to the same effect, be addressed by the State Medical Society to every keeper of an Apothecary's store, or other establishment, for the sale of any kind of medicine, in the City of Charleston, and as far as it can be effected, to every such person in the State, viz:

"Sir:—The South Carolina Medical Association is deeply impressed with the importance of the move made by the National Medical Convention held in Philadelphia, in May, 1847, for the purpose of discouraging the pernicious traffic in patented medicines. The Society does not think it necessary to state the reasons which induce them to approve of the recommendations there made, believing that they are so well understood as not to require either enumeration or comment. It will be enough for the Society, in accomplishment of its design, to request your co-operation; and to state, at the same time, that its members, individually and collectively, are resolved to do all they can, legally, to effect the object."

And that the latter be signed by the President, and one or both of the Secretaries of the Society.

5th. *Resolved*, That the Convention embodies, in its petition to the Legislature upon matters now before it, or about to be brought forward, a request to enact a law prohibiting the sale of any medicine, upon the label of which the ingredients it contains are not fully and accurately stated.

Dr. Ramsey moved that the report be accepted, and 100 copies printed for consideration to-morrow. Adopted.

On motion of Dr. Simons, the Convention adjourned until 11 o'clock to-morrow morning.

Tuesday, Feb. 15, 1848.—The Convention assembled at 11 o'clock, pursuant to adjournment.

The roll was called, and several gentlemen who had arrived since the sitting of yesterday, appeared, registered their names, and took their seats in the Convention.

The minutes of the meeting of yesterday were read and confirmed.

Dr. T. Y. Simons read a report from the Committee on the Registration of Births, Marriages, and Deaths, which, on motion of Dr. F. M. Roberts, was ordered to be printed.

1st. *Resolved*, That the Report on the Registration of Births, Marriages, and Deaths, with an accompanying memorial, be presented to the Legislature, at its next session.

2d. *Resolved*, That the members of this Convention, and the members of the Medical profession throughout the State, be requested to explain to the Representatives and Senators in their districts, the importance of the measure, and use their best exertions to obtain a passage of the bill.

On motion of Dr. Mitchell, the report and resolutions were unanimously adopted, and ordered to be printed with the proceedings of the Convention.

Dr. Wragg, from the Committee on Druggists, to whom had been referred the circular of the New-York College of Pharmacy, made a report recommending the adoption of a memorial to Congress, in relation to the frauds practised by many Druggists in the importation and manufacture of drugs.

Dr. McKain moved that the report be adopted, and that the Memorial be signed by the officers of the Convention, and a copy be sent to the Senate and House of Representatives, which resolution was adopted.

On motion of Dr. Lee, amended by Dr. Wylie, it was

Resolved, That a committee of one from each district represented in the Convention be appointed to ascertain the number of practitioners in this State, diplomated, licensed, and authorized, for the American Medical Association.

The report of the Committee on preliminary education, with the accompanying resolutions, was taken up and adopted.

Wednesday, Feb. 16th.—The following resolution, offered by Dr. Mackey, was unanimously adopted :

Resolved, That notwithstanding the very low standard of preliminary education adopted by the American Medical Association, and concurred in temporarily by this Convention, for prudential reasons, yet it is the opinion of this Convention that the respectability of the profession, and the usefulness and chances for eminence of the practitioner, would be greatly augmented by a preparatory course of liberal studies.

Dr. F. P. Porcher moved the following resolution, which was unanimously adopted :

Resolved, That a Committee of one from each district represented in this Convention be appointed by the President, whose duty it shall be to investigate the *Indigenous Medical Botany* of this State, paying particular attention to such plants as are now, or may be hereafter, during the term of their service, found to possess valuable medicinal qualities, giving not only the botanical or medical description of those not accurately described in the standard works of our country, but also the localities where they may be found, and report the same in writing to the next annual meeting of the South Carolina Medical Association.

Dr. Dendy offered the following preamble and resolutions, which were adopted :

However much other causes may tend to embarrass medical reform, we nevertheless regard the failure of Medical Colleges to require a strict conformity, even to their present low standard, as an impediment worthy of the most serious consideration. And while it affords us much pleasure to know that the Medical College of South Carolina stands among the first, in her preparatory requirements, and in the enforcement of them, we feel that more may yet be done to elevate her still higher.

It is apparent to all of us, that the term of lecturing in all our Medical Colleges is entirely too short to enable the different professors to do that justice to their subjects which their importance demands, and that it is far too short to enable students profitably to receive the amount of instruction which should be contained in a course of lectures. The door of entrance also into Medical Colleges is not sufficiently guarded.

The neglect on the part of first course medical students to attend regularly the lectures, is an evil of great magnitude. It is not only an obstacle to the attainment of medical knowledge, but it tends to consequences far worse—the destruction of morals.

The examinations for the degree of M. D. are not generally conducted with sufficient care to secure the ends contemplated by their institution. And as this Convention feels the greatest interest in the prosperity and usefulness of the Medical College of South Carolina, and as we look to her as the guardian of the Medical profession of this State, and as the institution which is to prepare those to whom are to be entrusted the progress and perpetuity of all reforms in the Medical profession, therefore

Resolved, That this Convention does earnestly recommend, that the Medical College of South Carolina lengthen the term of lecturing, from four to six months ; that she may better guard the door of entrance, and secure the attendance of first course students by examinations ; also that she should conduct her examinations for the degree of M. D. more rigidly.

Resolved, That should she adopt the above recommendations, we will use our influence in her support.

The report and resolutions of the Committee on Druggists were then taken up and adopted.

The Convention adjourned *sine die*, by resolving itself into the *South Carolina Medical Association.*

The officers of the Convention were requested to act as officers of the Association, until others were appointed. The Association then went into an election for Counsellors, after which it adjourned, to meet on the third Wednesday of February, 1849.

After the adjournment of the Association, the Counsellors went into an election for officers of the Association, when the following gentlemen were duly elected:

Dr. Ja[illegible] Moultrie, *President.*
Dr. Isaac Branch, Dr. J. C. Ready, *Vice Presidents.*
Dr. D. J. C. Cain, *Recording Secretary.*
Dr. R. B. Johnson, *Corresponding Secretary.*
Dr. F. M. Robertson, *Treasurer.*
Dr. P. C. Gaillard, *Orator for* 1849.

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The Thirteenth Medical District Society of Indiana, includes the counties of Henry, Madison, Grant, Hamilton, Hancock, Tipton, and Howard. This Society has been established and well supported for twelve years; it has regularly met and kept up its organization during that time. The following officers were, on the 3d of May, 1847, unanimously elected for the ensuing year, viz.:

Joel Reed, M. D., *President.*
Dr. A. J. Clawson, *Secretary.*
Dr. J. C. Beck, *Treasurer.*
Censors.—T. B. Woodward, M. D., T. N. Jones, M. D., and G. W. Ridell, M. D.

The next Annual Meeting of the Society is the first day of next May.

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Delegates from the "New York Academy of Medicine" to the American Medical Association.—The "New York Academy of Medicine," which comprises two hundred and sixty-one active resident fellows, has appointed the following gentlemen to represent it in the "American Medical Association, viz.:—Doctors, J. R. Manley. Isaac Wood, J. R. Wood, R. Watts, Jr., A. H. Stevens, F. Campbell Stewart, H. D. Bulkley, F. U. Johnston, A. C. Post, W. Parker, C. R. Gilman, Thomas Cock, J. C. Cheesman, S. P. White, J. A. Swett, J. H. Griscom, W. H. Van Buren, G. Carter, J. W. Francis, J. O. Pond, J. K. Rodgers, Chas. D. Smith, Thos. F. Cock, J. G. Adams, J. R. Van Kleek and Benjamin Ogden.

The Academy has likewise adopted the Code of Ethics of the late National Medical Convention.

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Extension of the Medical Session in the Medical Department of the University of Louisville.—The annual advertisement, just issued by this school, announces that the next session will commence on the 16th day of October, which, being Monday, and occurring just three weeks before the first Monday of November, (the sixth day,) will make the next session twenty weeks instead of seventeen. We understand that it is the intention of the Faculty to commence the session following the next on the first Monday of October, thus adding a month to the old term. We record this attempt with heartfelt pleasure, for our short sessions, in the United States, may justly be considered as adverse to adequate preparation for graduation. —*West. Jour. of Med. and Surg.*, March, 1848.

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DATURA STRAMONIUM AN EMMENAGOGUE.

BY B. F. JONES, M. D., OF ST. LOUIS COUNTY, MISSOURI.

Distinguished practitioners of medicine doubt whether there be any medicine known, capable of so influencing the uterus, as to compel it, even when healthy in other respects, to secrete the catamenia. Hippocrates made no pretensions to a knowledge of any such medicine, nor did Sydenham; and Boerhaave's catalogue of emmenagogues comprehends only such medicines as are conspicuous for determining to the pelvic viscera—stating that "we have no uterine remedies but sudorific determined to the uterus." Dr. Eberle tells us, "It is very doubtful whether any of the articles which have hitherto been employed for this purpose possess any direct influence over the uterine secretions;" and such, I presume, is the experience of physicians generally.

In reasoning upon this subject, it occurred to me, that inasmuch as there was a medicine (*the secale cornutum*) capable of exerting a specific impression upon the uterus, and forcing it to the energetic performance of *one* function—the expulsion of the ovum—there was nothing unphilosophical in the hope that a remedy might exist capable of urging upon it the elaboration of *another*—the secretion of the catamenia.

If Nature, in the exuberance of her munificence, had vouchsafed to us a medicine endowed with capability to abridge the parturient effort, it was scarcely expecting too much from her beneficence to hope, that among her rich *arcana* was another capacitated to place the uterus in a condition for the exercise of its function of reproduction. In the absence of the one, the other would not unfrequently be useless—and to that extent mar that beautiful harmony, and adaptation of means to ends, of which Nature is so observant in all her operations.

Persuaded of the philosophy of this view, as far back as 1839, when I practised my profession in the city of Chihuahua, in Mexico, I was led to experiment with a great number of powerful plants, of recognised capability strongly to impress the organism, with the hope of discovering among them a special relevancy of action for the uterus, during the suspension of its periodical function. The datura stramonium, from the energy it displays in affecting the nervous system, without exciting the circulation, together with its simultaneous relaxing effect upon the bowels, with the increase of urinary and dermoid secretion, presented strong claims to my attention in this experimental inquiry.

The result of my investigation is, the belief that stramonium does possess the power of imposing upon the uterus a renovated secretory effort, to the same extent that mercury does upon the liver, or the salivary glands, *ceteris paribus*, and is therefore eminently entitled to the cognomen of an emmenagogue; a distinction that cannot of right be conferred upon any other known article in the materia medica. So that properly there belongs to each of the important classes of abortives and emmenagogues, but one article—secale cornutum, and datura stramonium.—*Western Journal.*

APPLICATION OF THE NITRATE OF SILVER TO THE LARYNX IN CROUP.

(*Read before the Boston Medical Society for Improvement, by* CHARLES E. WARE, M. D.)—The very great mortality which attends membranous croup, makes every case of recovery interesting, and the treatment, when it has been consistent and efficient, instructive. Although we frequently hear well-informed practitioners talk flippantly of their success in the management of croup, yet every one who is in the habit of discriminating between the two forms of the disease, knows with what a sinking heart and faltering hand he undertakes the treatment of the one, and with what comparative confidence he deals with the other.

Within the last two or three years, the system of steaming by the inhalation of hot vapors of herbs of various kinds, has been tried pretty extensively in this neighborhood, and I should think from the number of successful cases reported before this Society, with encouraging success. One great and most serious objection, however, to this treatment, supposing its value established, is in many cases the impossibility, and in all the extreme difficulty, of applying the remedy effectually, with any apparatus which has yet been devised, and ingenuity in and out of the profession has not been idle in contriving. This obstacle in the way of the treatment which would seem to present the most promise, together with some apparent success in the applications of the nitrate of silver to acute inflammation of the tonsils both in children and adults, and the facility with which the nitrate of silver may be applied to the larynx with but trifling irritation in the adult, led me lately to try the application of it to the larynx of a child five years old, laboring under unequivocal membranous croup.

I was called to this patient, a boy five years old, Saturday, November 20th. The mother said that he began to breathe hard just a week previous, but as he had been subject to attacks of spasmodic croup, in several of which I had attended him, and usually found ready relief, she felt no great anxiety, especially as there was less constitutional affection than he had had in former attacks. His tonsils, also, had been for a year or more somewhat enlarged, and often gave a huskiness to his respiration and voice. On Tuesday he began to cough, and evinced other signs of a cold. These symptoms continued, he playing about, and having appetite, without anything very characteristic, till Friday afternoon, when the cough began to have a ringing tone, and the respiration to be very labored. I was not called to him till the next afternoon. Then there was the characteristic breathing of croup well marked. It had become sufficiently distressing to occasion great restlessness and jactitation, but was not accompanied by much febrile excitement, nor, as yet, prostration. The general expression of the child was good. On examining the fauces, they appeared red, and the tonsils presented distinct patches of lymph. On the backs there was an almost entire absence of respiratory sound, and no râles whatever. The breathing and cough were both dry, with very little râle in the trachea.

He was ordered strong mercurial ointment and a fomentation to neck, and pills of Dover's powder and blue pill once in four hours, and a syrup with opium and ipecac. at intervals between. Under the influence of the opium he got more sleep than during the previous twenty-four hours, but in the morning was no better, nor essentially different.

I now commenced the application of the nitrate of silver to the larynx, using a solution of the strength of a drachm to the ounce, and applying it with one of Dr. Green's whalebone staffs. I applied it twice in the course of the first day. The child the first time resisted violently, and I was obliged to use much force. But after having been persuaded once to submit quietly, the operation occasioned so little irritation that he never afterwards made the least objection to it, but allowed me to perform it as effectually as I could have done upon a grown person. The first applications were followed by so much excitement that it was difficult to see what was the immediate effect. But afterwards, when he was more tranquil during the operation, it was obvious that it produced an increased dryness of the cough and respiration, without immediate relief or aggravation of the labor in breathing. In the course of the day he raised twice considerable pieces of false membrane, very well marked, and stained with blood, together with a great deal of very thick, tenacious mucus, which was also occasionally stained with blood. After the discharge of the false membrane the breathing became much easier, and was never again as labored as it had been before.

The next day, Monday, respiration, although improved, was still very laborious. There was yet great deficiency of respiratory sound in the back, and absence of râles. After the application of the caustic, which was applied twice this day, the fauces appeared red, but there was no lymph visible. From this time the amendment, although slight, from day to day was constant till Friday, the 26th. No lymph was seen upon the tonsils. The caustic was applied once a day. Friday night, the breathing was more labored than the night before, and Saturday morning I again saw lymph upon the tonsils. Through Saturday and Sunday, however, he continued to improve, and Sunday evening uttered the first loud word which he had been able to speak since I had seen him. The caustic was now omitted, as well as all his medicines. His appetite, which had never entirely disappeared, became more urgent, and he was allowed to eat freely. Indeed, his diet had been liberal throughout. The respiratory sound gradually returned to the backs, but continued as it had done throughout, free from râle. The voice continues to improve, but still retains a huskiness. The caustic was applied twice the two first days; afterwards but once a day, the sponge never being introduced more than once at the same visit.

This is a case of croup in which the disease was obviously limited to the trachea, if not to the larynx, and in this respect was as favorable for the application of the peculiar treatment as it could be. In the majority of cases, from my own observation, the disease extends more or less into the lungs. Of five *post-mortems* which I have made, in one case disease was limited to the larynx and upper part of the trachea. In the other four it extended far into the lungs, in one producing chronic pneumonia, of which the child died after recovering from the croup. In such cases one would not expect much from the treatment, since the application could only be made over a very small extent of the diseased surface. It is as yet, however, not very well understood precisely where the obstruction takes place, which occasions the death in croup. It is probable that it varies greatly in different cases. I have seen once or twice, in *post-mortem* examinations, the trachea and larynx so thinly coated, and to such a limited extent, that it seemed impossible that it should not have been sufficiently free for respiration, while the large bronchi of the lungs on both sides were almost entirely obstructed by thick tenacious mucus. In such cases the source of death is probably obstruction of the bronchi. But from the great relief which is almost always given by the rejection of pieces of false membrane, and from the frequency of its occurrence (indeed, since attention has been drawn to the point, I think there are few cases occur in which it is not observed), it is probable that the cause of death is generally in the trachea, and most frequently at the upper part, or in the larynx. The latter fact would be indicated by the almost universal, if not universal, temporary relief which the operation of tracheotomy gives in these cases. If this part, then, could be kept free, the chances would be greatly increased of the child's being able to struggle against the disease.

The cases in which I have applied the nitrate, or seen it applied, to inflammatory affections of patients in which there was a tendency to this deposit upon the mucous membrane, have been as yet few, but it has certainly appeared that the application had much efficiency in keeping the membrane clear.

This is one case of recovery. My own observation would furnish nothing more in favor of any other treatment. Of fourteen cases of croup which I have either attended myself or seen during their course, four have recovered. In one of the cases of recovery, there was no treatment. The child was so violent that nothing could be done. The disease was left literally to its natural course. In the second case the treatment was essentially opiate. In the third case, the steaming was applied more efficiently than I have ever seen it in any other case. The fourth case was the present. An interesting point in this case was the speedy recovery of the voice. The child spoke loud at the end of the week after the treatment commenced. In all other cases of recovery which I have known, the absence of the voice has continued for many weeks; five or six has, I think, been the shortest limit.

The case is valuable, also, as showing that a sponge saturated with so strong a solution of nitrate of silver, can be introduced into the larynx of a child not only with safety, but after the first application, with so little inconvenience.—*Boston Med. and Surg. Journal.*

Since reading the above case, an article by Dr. Blakeman, of New York, in the American Quarterly retrospect, has been pointed out to me, according to which he has employed this same treatment with success.

Boston, Dec. 16, 1847.

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Franklin Medical College.—**Thos. F. Betton**, M. D., has been appointed Professor of the Principles and Practice of Surgery, in the place of **C. C. Van Wyck**, M. D., who resigns in consequence of intended removal from Philadelphia.

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Pennsylvania Hospital.—We are happy to announce the election of **George Fox**, M. D., as Surgeon to this Institution, in the place of the late Dr. Randolph.

Obituary Record.—With the deepest sorrow we have to record the death of **Jacob Randolph**, M. D., Clinical Professor of Surgery in the University of Pennsylvania, and one of the Surgeons of the Pennsylvania Hospital. Dr. **Randolph** was universally esteemed by his brethren for the correctness of his professional deportment, his sound surgical judgment, and his great skill as an operator. As a lithotritist he stood unrivalled; no other operator could, we believe, boast of equal success.

He died in Philadelphia, after a short illness, on the 29th of Feb., in the 52d year of his age.

The Philadelphia College of Physicians paid their respect to his memory, by attending his funeral in a body, and adopted the following Resolutions:

Resolved, That the College of Physicians deeply deplores the loss it has sustained by the demise of its late Fellow, **Jacob Randolph**, M. D., whose attainments, practical skill, and private worth, placed him in a position of merited eminence in our profession.

Resolved, That the condolence of the College be tendered to the family of the deceased, in their bereavement, and that a copy of these resolutions be forwarded to them, as a mark of the esteem and respect in which Dr. Randolph was held by his brother practitioners.

Resolved, That one of the Fellows be appointed to prepare a Biographical Notice of the deceased, to be read before the College, and deposited in its archives.

Dr. G. W. **Norris** was appointed to carry out the provisions of the last resolution.

Foreign Medical Intelligence.

ANATOMY.

Ganglionic character of the Arachnoid Membrane.—The serous investment of the brain has hitherto been considered solely in the light of a contrivance by which the integrity of the cerebral functions are maintained during any temporary change which may take place in the quantity of the circulating fluid; it has, however, been recently ascertained by Mr. Rainey, that it serves a further use, as a medium from which the ultimate fibres of the sympathetic system are distributed to the cerebral vessels. The first idea which the author conceived of the sympathetic character of the arachnoid, was from seeing a number of cords between the arachnoid and pia mater, and ramifying equally on both; the twigs supplying the former being further observed to be lost in certain minute corpuscles, in which the membrane abounded. Having satisfied himself that the above cords were in reality derived from the sympathetic system, by comparing them microscopically with other portions of that system, the author concludes that they in fact arise from the membrane itself, which stands to them in the relation of a ganglion or plexus, and is analogous to other plexuses of the same system. It must be observed, however, that the author does not consider the whole membrane to be nervous, but that this property resides chiefly in those parts which he describes as made up of a soft corpusclar matter similar to that which is seen in the true ganglia of the sympathetic.—*Medical Gazette.*

PRACTICAL MEDICINE AND PATHOLOGY.

REMARKS ON THE SICKNESS AND MORTALITY AMONG THE EMIGRANTS TO CANADA IN 1847;

With suggestions for an improved method of regulating future emigration, in a letter to Sir William Burnett, M. D., K. C. H., F. R. S., Director-General of the Medical Department of the Navy. By T. Stratton, M. D., Edinburgh; Licentiate Royal College Surgeons, Edinburgh; Hon. Member Highland Society of Canada; Member Toronto Medico-Chirurgical Society; Corresponding Member Literary and Historical Society of Quebec; Surgeon, Royal Navy, Particular Service.

The number of emigrants that left the British isles for Canada, in 1847, was three times greater than that in the season of 1846. The sickness and mortality among them, have been very great; and the distress and destitution thereby accruing to the surviving relatives, have been such as to claim from the humane all their sympathy, and from those in authority all their ability to prevent or to remedy such evils.

The following is a copy of a report by Mr. Buchanan, Chief Emigrant Agent at Quebec, of the number of emigrants that arrived at Quebec and Montreal during the season of 1847, up to the 10th of November, and compared with the total number that arrived in 1846; there is also stated the mortality in 1847:—

Embarked from	Steerage.	Infants	Cabin.	1846. Total.	Steerage.	Infants	Cabin.	1847. Total.
Scotland,	1494	31	120	1645	3462	174	116	3752
England,	8435	455	273	9163	29833	2305	190	32338
Ireland,	20169	673	207	21049	51129	2835	365	54329
Germany,	875	21		896	7458	226	13	7697
Total,	30973	1180	600	32753	91882	5540	684	98106
Deduct last year's emigrants.					30973	1180	600	32753
Additional number in 1847.					60909	4360	84	65353

Number that died on the passage, - - - - - -	5,293
Admitted into Grosse Isle Quarantine Hospital, 8,563, of whom died, - - - - - - - - - - - -	3,452
Died in Quebec Marine and Emigrant Hospital, and in the city of Quebec, up to 9th October, - - - - - - -	1,041
Died in Montreal Emigrant Hospital, and in the city of Montreal, up to 1st November, - - - - - - -	3,579
Total deaths, - - - - - -	13,365

(Signed)
A. C. Buchanan, Chief Agent.

Up to the first of November, and as far inland as Montreal, one emigrant in every seven had died; many of those who passed on from Montreal, sickened and died at one or other of the different places on the route—Prescott, Brockville, Kingston, Toronto, St. Catherines, Brantford, New London, or Amherstburg; and during November and December, there have been many deaths in the different emigrant hospitals, so that it is understating the mortality to say, that of those who left Britain, one person in every five was dead by the end of the year. The number that died on the passage is 5,293. I believe I am correct in stating, that only three or four ships carried surgeons, so that almost the whole of this large number died in a situation where there was no medical aid. The proportion of passage deaths to passengers is about one in eighteen, which is in sad contrast to what it was a few years before, when it was one in two hundred, (as stated by Mr. Hawes, quoted in Dr. Combe's excellent letter on Emigration, in the *Times* of 17th September, 1847.)

In the Kingston (Canada) Emigrant Hospital, from the beginning of the season up to the 18th of October, there were 1959 admissions and 707 deaths, the mortality being 35 per cent.; and there remained 431 patients in hospital.

In the Toronto Emigrant Hospital, up to the 22d of October, there were 3300 admissions, and 757 deaths, being about 22 per cent., and 739 patients remained.

SICKNESS.

In the ships where there was so much mortality, (in some vessels one-third, and in others, three-fifths of the passengers died,) there was, of course, among the other passengers a great amount of sickness, weakening them for one, two, or three months, and incapacitating them for labor on their arrival in America.

CAUSES OF THE SICKNESS AND MORTALITY.

The sickness and mortality were almost entirely from fever, (typhus fever, and that variety of it called ship-fever,) and dysentery, and in some of the ships sailing from ports in Ireland, or from Liverpool, with Irish emigrants, we may reasonably suppose that some of the passengers might embark infected with typhus, and this would, in a week or so, develop itself, and afterwards spread among the passengers. Dysentery arises sometimes from improper and imperfectly-cooked food, and, in certain circumstances, it also is occasionally infectious, so that it would, perhaps, spread in the same way as the fever.

The spreading of these diseases would have been much less, if it had not been aided by want of medical advice—an over-crowded state of the ship—an absence of due cleanliness—want of exercise on deck—and of proper cooking of the food.

But, on the other hand, in many of the ships, there is no reason to suppose that typhus, or its infection, or dysentery, was embarked, and the fever which appeared after leaving port, is sufficiently accounted for by the over-crowding, and the deficient ventilation, aided by the predisposing cause of low diet. Typhus arising in this way, afterwards spreads by infection, and so the remaining passengers ran two chances of being taking ill—that is, from the original cause, and from infection.

The same remark may be made regarding the dysentery; it would, in the first instance, arise from the uncooked victuals, and improper diet, and would then both continue to be produced by the original cause, and, perhaps, also be communicated by infection.* The sickness from embarked typhus, or its infection, and from dysentery, might have been much checked, and the sickness from typhus, or dysentery, springing up on board, might have been prevented by proper regulations. In some ships, from obstacles thrown in their way with regard to cooking, and, in others, from laziness, carelessness, or whatever it may be câlled, the passengers often did not cook their provisions at all. In others, in obeying the calls of nature, they invariably did so into the hold, and sometimes would not even leave their sleeping-berths; sometimes they would not allow the captain or crew to come down among them, afraid of being forced to wash, and to go on deck; in others, again, they were smoked out, and so forced to go on deck; and however well-intended on the part of the master this may have been, it cannot be forgotten that some, and, perhaps, many, may have been too weak either to move, or, even to be moved. Considering all these things, instead of wondering that the mortality was so great, we may feel surprised that it was not greater.

THE PASSENGERS' ACT.

The Acts of the Imperial Parliament by which emigration to North America is regulated, are the *Passengers' Act*, which was passed on the 12th August, 1842, and the *Amended Passengers' Act*, which was passed on the 22d July, 1847. Of the former Act:

Section 2. Exempts passenger-ships to North America from having to carry a surgeon. It prohibits a ship from carrying more than one person to every five register tons; and it enacts that, on the lower deck, each passenger is to have ten superficial feet of space "unoccupied by stores not being the personal luggage of passengers."

Note.—Ships ought to be obliged to carry surgeons, in cases to be afterwards mentioned. The Act ought to specify so many cubic feet of space for each passenger, *exclusive* of the space occupied by his personal baggage, for most emigrants have large chests or boxes taking up the room allowed for their owners. These boxes are often nearly empty, or, at best, contain apparel of little value even to those to whom they belong. This defect in the Act is a most important one, and ought to be immediately rectified.

Section 4 and 5. Omit to regulate the height of the berths, and also the distance between any two rows of berths.

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* Some physicians consider that dysentery is not infectious; others, that it is so, occasionally; and others, again, that it is so, only when complicated with infectious fever.

Note.—The height of the lower deck is *said* to be six feet, and the floor of the lower berth six inches above the deck, so that each berth ought to be, at least, two feet eight inches high. The space between any two rows of berths might be six or more feet.

Section 6. Provides that provisions be issued not less frequently than twice a week, and the following is the scale to be issued by the ship to those passengers who do not provide their own provisions: one pound a day of one of the following articles, namely, bread, biscuit, flour, oatmeal or rice, and half of the diet may be of potatoes, and five pounds of potatoes are to be considered as equivalent to a pound of one of the other articles.

Note.—Considering the improvidence of most of the emigrants, only one day's provisions ought to be issued at a time, as, when issued only twice a week, many of the passengers consume on that day the three or four days' provisions, and starve on the other days, and so injure themselves in three ways. Firstly, having nothing to eat on five days in the week; secondly, eating too much on the other two days; thirdly, when the intestinal canal is not distended by food to the usual extent, and on one day a quantity of it, and perhaps of a hard nature (as ship-biscuit), is eaten, painful distension of the canal, or griping, or inflammation, is apt to be induced. This irregularity in diet is also favorable to the production of diarrhœa and dysentery.

With regard to the *quality* of the diet:—Bread may be left out of the question, as, for any great number of persons on ship-board, there is no convenience for baking it. Oatmeal is much preferable to wheaten flour, and care ought to be taken, and very often is not taken, that it be cooked properly, and not taken with cold water only, and also that it be eaten with salt. Taking the diet as above, a good arrangement of it might be, on three days a week, half diet of potatoes, and half diet of oatmeal; on two days, biscuit; on one day, flour; and on another day, rice; and any deviation from this, to be towards oatmeal.

But with respect to the *quantity* of provisions, the above scale may do on an emergency, or for about a week; for a fortnight, double the quantity might be issued, and for any longer period, about three times the allowance would not be too much for the purpose of landing the emigrants in the state of health and vigor necessary for their immediately engaging in laborious occupations. Tea and sugar ought to be issued daily, and beef or pork, if not daily, ought to be granted twice or thrice a week. A sufficiently full and varied diet will keep the emigrant in good health, and enable him to provide for himself and his family on his arrival; while an unvaried diet, insufficient in quantity, predisposes him to disease, or actually induces it; by a moderately liberal scale of victualling, the interests of both humanity and economy are at the same time served.

The scale in the Act was intended only for the emergency of the emigrant after his private stock of provisions might have been exhausted. In the past season, many emigrants embarked without any private stock at all. Either from their private store or from the ship, a suitable scale of diet might be, daily, a small quantity of potatoes or other vegetables; tea and sugar sufficient for a morning and evening meal; a pound of bread, oatmeal, biscuit, or flour, and half a pound of beef or pork, the latter with pease-soup.

Section 10. Speaks of "the victualling of the crew and other persons (if any) on board."

Note.—The master, crew, cabin and steerage passengers, ought to be all numbered together; referring to "other persons," is giving an opportunity for the vessel to have more passengers than the Act is *intended* to allow.

Section 13. In prescribing the number of boats to be carried by ships of a certain size, it might be specified that the boats are to be able to carry about *so many* persons, as a ship may observe the *wording* of the Act, and still have boats unusually small, and insufficiently large for the object in view.

Section 18. Allows a ship that has cleared with an insufficient number of passengers, to embark others at other places, where there may be no custom-house officer, or emigration-agent, and consequently no check on the vessel's carrying more than the allowed number.

I heard of a ship that cleared with the full number of passengers, and then dropped a few miles down the river, and in the dusk, a number of carpenters came on board with wood, and in an hour or two, put up rows of berths in places where there was properly no room for them; then about 100, or more, emigrants came on board, and the ship sailed.

Section 51. States that "cabin passengers" are not included among the "passengers."

Note.—However the second section numbers the master and the crew along with the passengers, they ought to be all numbered together, otherwise it leaves an opening for "evading the Act," as, if a ship has more than the allowed number of steerage-passengers, some of them, during the time of inspection, may be passed off as cabin-passengers, and others, as belonging to the crew.

Having thus made a few remarks on what is contained in the Act, I now beg to offer some observations on what is omitted in it.

The Act ought to prohibit the washing of the lower deck oftener than once a week, and not even then, without previously obtaining permission from the surgeon; the deck to be washed *after* the passengers have breakfasted, and before noon, and with no more water than is absolutely necessary. Much disease is produced on board ship, by the too frequent washing of the lower deck; too much water also is generally used, and the consequence is, that a deck has hardly time to dry till it is washed again.

The bad results of this system are well known; catarrh, rheumatism, and other complaints are induced in the case of robust seamen, and still more readily in the instance of women and children, and this for two reasons, both on account of their weakness, and from their being more in the damp atmosphere. In some of the emigrant ships, the washing of the lower deck interfered with the cooking of breakfast, and when delayed till the afternoon, the deck is not dry by the usual time of retiring to rest.

The Act ought to prohibit any sailing ship that carries more than 40 or 50 steerage-passengers, from leaving Britain for British North America at a date in the season later than the 1st of August (perhaps the 1st or the 15th July would be a better date), as when vessels arrive in October or November, emigrants have no time before winter, to settle on land, or easily to obtain employment. The ship *Lord Ashburton*, with 470 passengers* from Liverpool, arrived at Quebec on the 1st of November, and the *Richard Watson*, with 170 passengers from Sligo, arrived at the same port on the 7th November, a date much too late. In the latter vessel, there were several deaths from cold, some of the children having no clothing whatever, and their relatives not being able to spare them any of their own.

THE AMENDED PASSENGERS' ACT.

This Act makes the *Passengers' Act* apply to vessels carrying more than one person to every twenty-five register-tons, the former Act referring to thirty tons.

OF THE EXPENSE OF THE EMIGRANT HOSPITALS IN CANADA IN 1847.

I am informed, that up to the end of December, the expense of the Grosse Isle Quarantine establishment, and of the Emigrant hospitals in various parts of the province, has amounted to about £100,000 sterling, which is more than one pound sterling for each emigrant that left Britain for Canada; besides the above outlay by Government, there are the expenses of private subscriptions for maintaining widows and orphans. I am inclined to think, that by an improved scale of diet, and by every ship carrying a government-surgeon, nearly all of the above sickness, mortality, and expense, might be avoided, and this at a cost which would be, perhaps, a tenth, or at most a fifth of the expenditure caused by the emigrant sickness in 1847.

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* Of whom 64 died on the passage; by the time they reached Montreal there were 120 deaths among them; in this ship the custom was for the passengers to eat their provisions uncooked.

OF APPOINTING SURGEONS TO EMIGRANT SHIPS TO NORTH AMERICA.

There are, at present, two things wanted in emigrant ships to North America: one is, to have a government-agent on board to prevent too many persons being embarked, and to see that the passengers have justice done them, with respect to their provisions, water, accommodations, convenience for cooking, ventilation, &c.; the other desideratum is, to have a surgeon; and some consider that it would be difficult, or impossible, to procure as many medical men as would be required for the purpose, and there certainly will, and ought to be great difficulty in doing so, if the remunerating of them be left in the hands of the ship-owners, who have not the inclination to pay them according to the value of the services rendered.

The advantage of having a government-agent, and also a surgeon, may be conveniently combined, by the Act requiring that every sailing-vessel to N. America, which carries more than 60 persons (master, crew, cabin and steerage-passengers included) shall have on board a naval medical officer, who shall be in the same position, and have the same charge and responsibility as the surgeon-superintendent of a convict-ship. A sum equal to his pay and expenses, might be charged by Government to the ship, and he, appointed and paid by the Admiralty, would be independent of the owners, and would see that the passengers were fairly treated in all respects, and that no more than the allowed number was embarked.

To ships carrying under 150 passengers (crew, cabin and steerage-passengers included), there might be appointed an Assistant-Surgeon of the Royal Navy of at least four years' standing; he, to have full-pay from the date of appointment, and for five weeks after the ship's arrival in the destined American port: to have travelling expenses from London, or elsewhere, to the British or Irish port of departure; to mess in the cabin with the master, and at the ship's expense; his connexion with the ship to cease on the emigrants leaving it; to have certain travelling expenses from Quebec, &c., to New York, Boston or Halifax, for the purpose of proceeding home by the first Halifax Mail Steamer, and in which his passage would be paid; also, that his remuneration might bear some proportion to his trouble, he might have allowed him some sum, say five shillings for each passenger *landed in America.*

To ships carrying more than 150 persons, a Surgeon of the Royal Navy to be appointed as above.

It has been said, that it would be impossible to obtain a sufficient number of surgeons for emigrant-ships, and certainly, even if sufficiently well paid, it would not be an easy matter to procure, from among civil surgeons, a sufficient number, as it would never answer for a private practitioner to leave his practice for a few months to embark on this service. But by having recourse to the navy medical department, there would be no difficulty; as on their return to Britain, if these medical officers did not make a second American voyage that season, some naval appointment would perhaps be falling vacant, or, in any case, they might, in the usual way, go on half-pay, for a short season. The period of service in emigrant-ships ought, of course, to count the same as service in one of Her Majesty's ships.

SUGGESTIONS FOR AN IMPROVED EMIGRATION SYSTEM.

I may now recapitulate some of the amendments I beg to propose on the present mode of conducting emigration to North America:—

1st. Every sailing vessel carrying more than sixty persons, to have on board a naval medical officer.

2d. No sailing vessel having more than 40 or 50 steerage passengers, to be allowed to leave the British Isles for British North America at a date in the season later than the 1st of August, (perhaps the 1st or 15th of July would be a better date.)

3d. The present scale of provisions to be re-considered, and the question entertained, whether it might not be made greater in quantity, and more varied in kind, with advantage, not only to the emigrants, but also to Government.

4th. Each passenger to have *so many* cubic feet of space, *exclusive of the room occupied by his personal baggage.*

5th. Several other corrections of, and additions to, the *Passengers' Act*, are given above, and I may now conclude these brief remarks with observing, that although this letter be addressed to Sir William Burnett, M. D., I have introduced some medical details and explanations, from considering that it may come under the notice of non-professional readers.

For the last four months, since August, 1847, I have been constantly engaged, professionally, in the emigrant hospitals of Grosse Isle, Quebec, or Montreal, and have had ample and varied opportunities of witnessing the condition of the emigrants, both healthy and sick.

I have been occupied in making observations on the disinfecting fluids of Sir William Burnett, M. D., and of Mr. Ledoyen, the former of which is composed of the chloride of zinc, and the latter of the nitrate of lead; and after a sufficiently long observation of the effects of both, I give a decided preference to the fluid of Sir William Burnett.

The solution of the chloride of zinc possesses several great recommendations, and these are not counterbalanced in the least by any inconvenient results. It is much superior to the solution of the nitrate of lead, both, positively, and also on account of Mr. Ledoyen's fluid, like the other preparations of lead, being liable to produce one or other of their long-known bad effects, such as colic, palsy, apoplexy, wasting of the body, permanent decrepitude, and particularly in typhus, a depressing effect, which is the exact opposite of the one that is required in that disease. The proprietors of the Ledoyen fluid used it in considerable quantity in three cases of typhus; cloths wet with it were applied to nearly the whole surface of the body. These three cases were, I believe, the only instances in Canada where the fluid was much applied to individual patients ill of typhus, and all of them ended fatally.

Laying aside, for a moment, considerations of humanity, it is, indeed, singularly absurd and ridiculous that the proprietors of Mr. Ledoyen's fluid should have recommended it as a certain cure for typhus, when it so happens, that on account of its sedative and depressing effects, it is positively injurious, and apt to be fatal.

On the lower decks of emigrant-ships, ventilation ought to be as much attended to as the weather will permit, and it will be highly conducive to comfort and health to use Sir William Burnett's Fluid daily. The proportion of one ounce of the strong fluid to every ten persons, is sufficient in ordinary cases; where there is much dysentery, twice or thrice this quantity may be used.

During the past season, in Canada, a great many medical men, clergymen, magistrates, and others, have died of emigrant fever; and, emigrants going out as servants to places in the country have, soon after, taken fever, and died; and the disease has extended itself finally to several others in the house.

I have written these brief remarks in the midst of more pressing engagements, and have not done the subject the justice which its importance merits; but I hope I have said enough to show that there are two ways of managing British Emigration to North America. One is that of imperfect regulations, imperfectly carried out, the consequences of which are, great sickness and mortality among the emigrants, both on the passage, and after their arrival; distress and destitution among the surviving widows and orphans; the loss of many valuable lives in Canada from the spread of emigrant-fever throughout the province; expense to private individuals in providing for widows and orphans, and the outlay, by Government, of about £100,000 sterling, in supporting emigrant hospitals. And, on the other hand, I have endeavored to show that, by amending the *Passengers' Act*, as is herein proposed, all the above evils may be entirely, or almost entirely prevented; added to which, the expense of the plan would probably be about one-tenth, or one-fifth of the sum that the emigrant sickness of 1847 has cost, and a successful attention would thereby be given to the interests, both of humanity and of economy.

T. STRATTON, M. D., *R. N.*

Montreal, 1st January, 1848.

P. S.—Since the above was written, it was officially announced on the 2d of March, in the Legislative Assembly, that for the relief of emigrants this season, there had been already expended the sum of £148,000 currency, and about £12,000 more remained to be paid. Besides this total of £160,000 currency, or £131,000 sterling, the expense of the emigrant hospitals for ten weeks more, up to the middle of May, properly belongs to the season of 1847. T. S.

Montreal, 4th March, 1848.

British Amer. Jour. Med. and Phys. Sciences.

We add the main features of a bill for the same objects introduced into the House of Representatives (U. S.) by Mr. GRINNELL, and which has since become a law.

"1. That all vessels, whether of the United States or any other country, having sufficient capacity, according to law, for fifty or more passengers (other than cabin passengers) shall, when employed in transporting such passengers between the United States and Europe, have on the upper deck, for the use of such passengers, a house over the passage-way leading to the apartment allotted to such passengers below deck, not less than four feet by five feet on the deck and five feet high, firmly secured to the deck or combings of the hatch, with two doors, the sills of which shall be at least one foot above the deck, and also with two windows, so constructed that one door or window in such house may, at all times, be left open for ventilation; and all vessels so employed, and having the capacity to carry one hundred and fifty such passengers or more, shall have two such houses; and the stairs or ladder leading down to the aforesaid apartment, shall be furnished with a hand-rail of wood or strong rope.

2. Every such vessel so employed, and having the capacity for more than one hundred passengers, shall have at least two ventilators, to purify the apartments, &c.

3. All vessels employed as aforesaid, and carrying more than fifty such passengers, shall have a camboose or cooking-range on deck, housed and conveniently arranged for the use of the passengers; and if carrying more than two hundred, and not more than three hundred passengers, then two such cambooses or cooking ranges, &c.

4. All vessels shall have on board, for the use of such passengers, at the time of leaving the port whence such vessel shall sail, well secured under deck, for each passenger, at least fifteen pounds of good navy bread, ten pounds of rice, ten pounds of oatmeal, ten pounds of wheat flour, ten pounds of peas and beans, thirty-five pounds of potatoes, one pint of vinegar, sixty gallons of fresh water, ten pounds of salted pork, free of bone, all to be of good quality, and a sufficient supply of fuel for cooking; but at places where either rice, oatmeal, wheat flour, or peas and beans cannot be procured, of good quality, and on reasonable terms, the quantity of either or any of the other last named articles, may be increased and substituted therefor; and in case potatoes cannot be procured on reasonable terms, one pound of either of said articles may be substituted in lieu of five pounds of potatoes; and the captains of such vessels shall deliver to each passenger at least one-tenth part of the aforesaid provisions weekly, commencing on the day of sailing; and daily at least three quarts of water, with sufficient fuel for cooking; and if the passengers on board of any such vessel in which the provisions,

fuel and water herein required, shall not have been provided, as aforesaid, shall at any time be put on short allowance during any voyage, the master or owner of any such vessel shall pay to each and every passenger who shall have been put on short allowance, the sum of three dollars for each and every day they may have been on such short allowance, to be recovered in the same manner as seamen's wages are or may be recovered.

5. The captain of any such vessel so employed, is authorized to maintain good discipline, and such habits of cleanliness among such passengers as will tend to the preservation and promotion of health.

A number of specifications follow.

6. The master and owner or owners of any such vessels so employed, who shall not comply with the directions of the first and third sections of this act, shall severally forfeit and pay to the United States, the sum of two hundred dollars, for each and every violation of, or neglect to conform to the provisions of each of said sections; and fifty dollars for each and every neglect or violation of any of the provisions of the fifth section of this act.

7. Requires the collectors of customs to appoint an officer to examine emigrant vessels.

8. Amends the act 'regulating the carriage of passengers in merchant vessels,' so as to allow sixteen superficial feet on deck for each passenger, when the height between decks is less than six feet; when less than five feet, twenty-two feet are allowed.

9. This act shall take effect, in respect to such vessels sailing from ports in the United States, in thirty days from the time of its approval; and in respect to every such vessel sailing from ports in Europe, in sixty days after such approval; and it is made the duty of the Secretary of State to give notice in the ports of Europe, of this act, in such a manner as he may deem proper.

10. So much of the first section of the act entitled 'An act regulating passenger ships and vessels,' approved March 2d, 1819, or any other act that limits the number of passengers to two for every five tons, is repealed."

Registrar-General's Return—Mortality from Epidemic Influenza during the last quarter.—The last Quarterly return of the Mortality in 117 districts of England, issued by the Registrar-General, is of unusual interest in a medical point of view. Our professional readers will be prepared for the announcement of a great increase in the number of deaths; and it may be useful, in relation to the history of the epidemic which has been the cause of this increase, to direct attention to some of the principal facts connected with its progress and mortality. These are ably analyzed in the table before us.

The 117 districts comprise thirty-six in the metropolis, and eighty-one in the provinces, including the principal towns and cities of England. The population of these districts was, in 1841, 6,612,800, and they have hitherto returned less than half the deaths in England. The excess of deaths in the last quarter was no less than *thirty-five thousand* above the corrected average of 1839-45. The surplus mortality, therefore, may be compared to the sudden destruction of the whole population of one of our large provincial towns! The increased mortality in the metropolitan districts may be estimated from the following statements. The deaths registered in the quarter ending

December 1845, were 11,838
" 1846, " 13,221
" 1847, " 18,553

The deaths in the quarter just terminated exceed, by nearly *four thousand*, the greatest number of deaths which have been registered in the same quarter for the last nine years! The annual mortality of London, during six weeks, was, in fact, raised from 2.52 to 4.57 per cent.; in one district it was as high as 7.5 per cent., in other words, the usual rate of mortality was trebled.

As we might have anticipated, the epidemic killed twice as many people in the *insalubrious* parts of London as it did in those less unhealthy; its fatality in Lewisham and St. George's in the east, was in the ratio of 1 to 4. This is an important fact for the consideration of those who are exerting themselves in endeavoring to remove and suppress nuisances.

"In April and May, typhus became epidemic; instead of the average of 34, *fifty* died weekly; it steadily spread until it killed a hundred and eleven victims in a single week. Diarrhœa, dysentery and cholera had been a little more fatal than usual throughout the year: 17, however, only died of these diseases in the first week of July; the mean temperature of the air was above 60°; the number of deaths rose to 38, 47, 67, 125, 128, 188, by the middle of August, and then gradually subsided. Notwithstanding the continued prevalence of typhus and scarlatina, the deaths in the last week of October were only 945; one person died of influenza, 36 of bronchitis, (inflammation of the air tubes,) and sixty-two of pneumonia (inflammation of the substance of the lungs). In the three weeks following, ending Nov. 20, the total deaths were 1052, 1098, and 1086; of which 2, 4 and 4 were by influenza; 49, 58 and 61 by bronchitis; 68, 79 and 95 by pneumonia. The wind had generally been blowing S. S. W. and S. W. since the first week of October; the weather was unusually warm; a brilliant aurora was observed, and shook the magnets on October 24: it appeared eight times during the quarter. On Tuesday, November 16th, there was a remarkable darkness; the wind changed to N. W., and, amidst various changes, still blew from the north over Greenwich at the rate of 160 and 250 miles a day. The mean temperature of the air suddenly fell from 11° above to 10° below the average; on Monday it was 54°, Friday 32°; the air on Friday night was 27°, the earth was frozen; the wind was calm three days, and on Saturday evening a dense fog lay over the Thames and London for the space of five hours. No electricity stirred in the air during the week. All was still: as if Nature held her breath at the sight of the destroyer, come forth to sacrifice her children. On Sunday the sky was overcast, the air damp, the wind changed in the night to S. by E., and passed for four days over Greenwich at the rate of 200 and 300 miles daily: the temperature suddenly rose, and remained from 2° to 9° above the average through the week ending November 27th, when the deaths of 1677 persons, 819 males and 858 females, were registered; 771 persons under 15 years of age, 518 aged 15—60 and 388 of the age of 60 and upwards. Influenza was epidemic. On the first week of December, *two thousand four hundred and fifty-four* persons died: 1141 were males, 1313 females; 1012 children, 712 persons in the prime of life, 730 of the age of 60 and upwards. On the week following, *two thousand four hundred and sixteen* persons died: 1175 males, 1241 females; 1016 under the age of 15; 698 at the age of 15—60 and 702 at the age of 60 and upwards. The deaths in the weeks ending Saturday, December 18, December 25, and January 1, were 1946, 1247 and 1599. 11339 persons died in six weeks, and altogether the epidemic carried off more than 5000 souls over and above the mortality of the season. The epidemic attained the greatest intensity in the second week of its course; raged with nearly equal violence through the *third* week; declined in the *fourth*, and then partly subsided; but the temperature falling, the mortality remained high not only through December, but through the month of January."

We may now proceed to examine the influence of *age* and *sex* upon the rate of mortality. It would appear from the return, that the epidemic was most fatal to adults and to the aged. The mortality in childhood was raised 83 per cent.; in manhood, 104 per cent.; in old age, 247 per cent. Between the ages of 4 and 25 the mortality was comparatively not much increased; and at the age of 10—15, the healthiest period of life, it was scarcely increased at all. In estimating the relative mortality of the *sexes*, it must be remembered that at all ages there are more females than males living in London. We must go back to the census of 1841 for the comparison, and then we find that at and above—

Years of age.		
55	there were living	71384 males, 90328 females.
75	" "	6788 males, 11147 females.

Hence it follows that all diseases which are attended with a great increase of mortality at an advanced period of life, must cause a greater number of deaths among females than males, although the disease itself may not really be more fatal to one sex than the other. The difference of result, therefore, is merely numerical, and it does not appear that there was any appreciable difference in the proportion of deaths caused by this epidemic in the sexes.

A more material modifying condition was the state of *health or disease* of the individual. The influence of this condition was not so much manifested with respect to the numbers attacked; for the healthy and the diseased were equally attacked by influenza—as with respect to its fatal effects.

"The vital force was extinguished in old age and chronic diseases. The poison, permeating the whole system, fastens chiefly on the mucous membrane lining the sinuses of the face and head, and the air-tubes of the lungs. Hence it is fatal to the asthmatic. The deaths directly ascribed to asthma in October and November were 12 weekly; in the six weeks of the influenza epidemic, 77, 86, 78, 52, 14, 26, besides the numerous cases classed under influenza. 36 deaths were ascribed to bronchitis in the week ending October 30th, and 49, 58, 61, 196, 343, 299, 234, 107 and 138 in the nine following weeks. 62 deaths were ascribed to pneumonia in the same week, and 68, 79, 95, 170, 306, 294, 189, 131, 148, in the nine weeks following. In some of these cases, the inflammation specified was the primary disease, in others secondary, and in many it was purely influenza—mis-reported. There is a strong disposition among some English practitioners, not only to localize disease, but to see nothing but a local disease; hence, although it is certain that the high mortality on record was the immediate result of the epidemic of influenza, the deaths referred to that cause are only 1157; namely, in the first week of November 2, and in the eight weeks following, 4, 4, 36, 198, 374, 270, 142, 127, and these include nearly all the cases in which influenza was returned, whether as primary, or secondary in conjunction with other diseases. A similar defect has hitherto been found in the returns of all great epidemics. In 1665, the great plague year, 97306 burials were returned in the London Bills of Mortality, only 68596 of which were ascribed to plague. Influenza attacked persons laboring under other zimotic diseases: thus the deaths from hooping-cough rose from 12 and 25 to 65 and 71 during the epidemic. The deaths from measles rose from 43 to 96, 89, 69, 75, during the first four weeks of the epidemic, and then subsided to 37 and 58. Typhus, which had been fatal to 70 and 80 weekly, rose to 132, 136 and 131, in the second, third and fourth week of the influenza epidemic, and then fell to 83 and 74. Although influenza is not mentioned in these cases, it is in others, and there can be little doubt that two or more zymotic processes do often go on simultaneously in the blood and body—a fact of profound interest to the pathologist, and worthy of attentive investigation.

The following remarks respecting the probable origin and mode of diffusion of influenza will be found of interest:—

"Influenza, like small-pox, probably always exists; in ordinary circumstances, it is confounded with inflammation of the air-tubes, yet in London from one to five deaths have been directly referred to it, nearly every week since the new London tables were published. Like other zymotic diseases, it becomes at intervals of some years epidemic; that is, it attacks the people generally of all classes. Its epidemics are distinguished by the numbers they assail—by affecting the same persons more than once—by being most fatal to the aged of both sexes, and, therefore, where there are more old women than old men, causing the deaths of females to exceed those of males during their prevalence—by great differences in the severity and fatality of their attacks—by the rapidity of their course, and passage from place to place. After the mortality they occasion becomes apparent in London, it attains a maximum in the second or third week; and the mortality falls to the average in the sixth or seventh week. Influenza appears to be generated in ill-organized camps, in crowded, ill-cleansed cities; and to be most fatal among people who have for some time before been depressed, ill-fed or ill supplied with vegetables, as after hard winters and in war: it rages in cold and hot, moist and dry weather, but most frequently breaks out after a thaw, or with violence after a fog, generally the result of cold streams of air mixed with warm air—and a calm. The saturation of the atmosphere favors the transformation of all organic matters; and those of a zymotic character among the rest. Extreme cold only never raises the weekly mortality in London above 1500; extreme heat still less; intermediate changes affect the mortality but slightly in ordinary circumstances. November fogs occur every year without giving rise to influenza: in November, 1847, the weather was nearly the same all over England, yet influenza did not break out simultaneously. When once generated, the epidemic spreads through the air. The great epidemics generally travel from Russia, over Germany, Denmark, Sweden, England, France, Italy, Spain—in from three to six months; and then reach America. Influenza is often associated with other epidemics. It appears to have preceded or accompanied the plague in the Black Death of the 14th century; it preceded the great plague of London (1665); it followed epidemic typhus in London in 1803, preceded it in 1837, occurred in the midst of the typhus epidemic of 1847, preceded and followed the epidemic cholera in 1831-2-3. It carries off asthmatic persons, and those suffering from chronic disease. It affects those laboring under other zymotic diseases; in the healthy it quickens the seeds of other maladies, particularly of the lungs. The fatality and duration of attacks vary with age: in some of the late epidemics 2 in 100 cases attended by medical men are said to have died. If this was the rate of mortality in London, for 5000 deaths there must have been 250,000 cases of sickness of not less than seven days' duration. This would be little more than one in eight of the population; but nearly all were affected more or less: and, without taking slight instances, it is probable that not less than 500,000 persons in 2,100,000, suffered in London from the epidemic of 1847.

"The English physicians of the 18th century agreed in pronouncing influenza *contagious*. By this they did not mean that it was propagated by *contact*, but that it was introduced into cities, institutions and houses in England by persons actually affected by the disease. This notion is, however, too exclusive; the word 'contagion,' applied to influenza or cholera, is apt to mislead, and to have practically a bad effect. When people ask if a disease is contagious, they generally mean: 'Are we more likely to have influenza or cholera if we touch or go near persons laboring under these diseases?' Now if the matter of contagion is very diffusible, and is distributed equally through the room, the house, the street, the city in which a patient is lodged, no one living in the house, street or city is much more likely to be infected if he approach the sufferer than if he remain in absolute solitude, shut up like the grocer of Wood-street in the plague. The matters which excite influenza and cholera are evidently highly diffusible; in a few days influenza spread all over London; it met you everywhere: nobody, therefore, has attempted to show that medical men, nurses, or others in attendance on the sick, suffered more than other people. If such should ever be the case either in the influenza or the cholera epidemics, it will be in rare circumstances, and should never deter the most timid from discharging their duties to the sick.

"The earth, it is well known, is surrounded by an atmosphere of organic matter, as well as of oxygen, nitrogen, carbonic acid, and watery vapor. This matter varies, and is constantly undergoing transformations from organic elements: it can neither be seen, weighed nor measured. The chemist cannot yet test its qualities. Liebig, with all the appliances of the Giessen laboratory, cannot yet detect any difference between the pure air of the Alps, and the air through which the hound can tell a hare, a fox, or a man has passed; or the air which observation shows will produce small-pox, measles, scarlatina, hooping-cough, dysentery, cholera, influenza, typhus, plague. These matters may either be in a state of vapor, that is, elastic, or inelastic; or, like water, they may exist in both states. They are most probably in the state of suspension; hang, like the smoke in cities, over the places in which they are produced, but are spread and driven about like vesicular water in clouds. A stream of aqueous vapor of the same elasticity from the Atlantic, passing over England, is, in one place, perfectly transparent; in another, mist; in another, rain: so clouds of infectious matter may fleet over the country, and in one place pass harmless by, in another (as influenza in London) destroy thousands of lives. The emanations from the living, the graves, the slaughterhouses, the heaps of filth rotting, the Thames—into which the sewers still empty—raise over London a canopy which is constantly pervaded by zymotic matters; in one season this, in another that, preponderating; and the epidemic influenza may easily be conceived either to have broken out spontaneously, to have been conveyed here by ships, or to have been brought over by the winds.

"The zymotic hypothesis, here so well stated, explains the phenomena to a certain extent. Still epidemics afford a vast field for research; for much remains to be investigated. The mariner, however, steers his ship without knowing whence the winds come, whither they are going, or why they are blowing; so, as the returns adduced above, establish beyond a doubt the fact, that influenza was four times as fatal in one part of the population of London as it was in another, and that it is much more fatal in a part commonly insalubrious than in a part usually healthy, the course to be pursued is plain. If the means which improve the public health are applied with intelligence and energy, the general mortality can be reduced, and the ravages either of any future influenza, or of the coming cholera, can be rendered inconsiderable.—*London Medical Gazette.*

Urine in Typhoid Fever.—M. Martin Solon lectured on the state of the urine in typhoid fever: his conclusions were as follows:—1. The urine is less abundant, of a high color, and more dense than in health, it is almost always acid. 2. Alkalinity of the urine is rare; nevertheless, in typhoid fever, the urine quickly passes into the alkaline state, from the superabundant quantity of urea contained in it. This quantity is sometimes so considerable that it is possible to obtain crystals of the nitrate of urea without previous evaporation. 3. Though habitually clear, the urine of typhoid patients sometimes exhibits a mucous cloud. 4. The clear urine sometimes remains unchanged under nitric acid, at others a slight cloudiness is produced. 5. This cloud is formed of the bi-urate of ammonia, and is seen at certain periods of fever, especially towards the crisis. 6. The bile undergoes a sensible change during the progress of fever, which change is doubtless the cause of the appearance of *bili-verdine* in the urine. 7. Albuminuria is a frequent temporary phenomenon in fever; and generally indicates a severe case. 8. Much advantage to prognosis and treatment may accrue from the inspection of the urine in fever.

Remarks on the Action of Narcotic poisons—the Effects of Chloroform, and the stages of Insensibility produced by it.—Treatment of Cases of Poisoning by the Vapor.—By Francis Sibson, *Esq.—General Hospital, near Nottingham.*—The death of Hannah Greener, under the influence of chloroform, painfully reminds us that chloroform is not only an admirable anæsthetic, but that it is also a narcotic poison of great power and rapid action. Chloroform, ether and alcohol, are closely allied, both as anæsthetic agents and as narcotic poisons. In small repeated doses they produce agreeable exhilaration and pleasing hallucinations. A friend informs me that he has frequently produced, by merely inhaling chloroform from a bottle, the most delightful thrill over his whole frame. These narcotics, carried by the blood into every capillary, excite simultaneously every part of the frame. The action on the capillaries themselves is universal; they enlarge and are distended with blood, which now circulates through capillaries previously invisible. The conjunctiva becomes injected, and the lips and cheeks are turgid. The secretions are consequently increased, the eyes become watery, and saliva collects in the mouth; while the visible capillaries are turgid, the capillaries in the brain, the lungs, and the other viscera, are turgid likewise.

Turgidity of the capillaries is an effect characterizing the narcotic poisons. Alston observed this in frogs poisoned by opium. I dipped the limb of a frog into a watery infusion of opium: all the capillaries of the limb were soon injected with blood. Mr. Nunnely has noticed the remarkable reddening from the distension of the capillaries produced by prussic acid. Stramonium, hyoscyamus, and belladonna, often excite universal redness of the skin. The experiments of Mr. Wakley show that ether and chloroform cause distension of the capillaries in the lungs and other internal organs.

The action of chloroform, ether and alcohol, pervades the whole frame. In the first stage, the excitability of every organ and fibre is exalted, but throughout, their marked action is upon the brain. Exhileration is followed by excitement, excitement by cerebral disturbance. At this stage, the person affected revels in the absurdities of social intoxication: consciousness still exists, but it is deranged. The mind is intent in its own way on many things, but does not now observe all personal realities. The mind often at this stage does not feel pain, simply because it is intently taken up with other things, just as a man in battle often does not feel a wound. This state of deranged consciousness is also that of staggering intoxication, the muscular power and control being enfeebled, and sensation blunted.

This stage of cerebral excitement and disturbance is speedily followed by the stage of cerebral sleep. There is unconsciousness, but not coma; the person sometimes can be roused, the eye turns up as in sleep, and the iris contracts. Now in all persons free from cerebral disease the pupils contract during sleep. I have opened the eyes of many sleepers, and, the brain being sound, I invariably found the pupils contracted. The sounder the sleep, the smaller the pupil. In all persons the pupil dilates as soon as they awake, and if their sleep be sound, the dilatation is gradual.

I first noticed the contracted pupil, during sleep, in a patient under the general influence of belladonna; his pupils when awake were largely dilated. I lifted his eyelids, when asleep, and found them contracted; he awoke, and instantly they dilated. Opium produces an almost characteristic contraction of the pupil; it causes, in fact, a deep but rousable sleep—a true sopor.

Opium is not the only narcotic that induces contracted pupils. Dr. Ogston found that of 22 persons poisoned by alcohol, 6 had contracted pupil. In one case, on evacuating the stomach, dilatation of the pupil gave immediate place to contraction; and, according to Bedingfield, who witnessed many cases poisoned with rum, the patient will recover if the iris be contractile, but if it be dilated and motionless, recovery is improbable.

Under the increasing influence of ether and chloroform the pupils first contract, then oscillate between contraction and dilatation, and finally dilate. So long as the pupil is contracted, a dreamy state often exists, and the patient, when operated upon, frequently manifests an unremembered consciousness; he is, in fact, in the state of sopor. When the pupils dilate, and the iris is immovable, consciousness is extinguished, and the patient is in the state of coma.

In 15 dogs in which Dr. Percy injected alcohol into the stomach, veins, or arteries,

The pupil was contracted in - - - -	4
" first contracted then dilated in -	2
" contracted and dilated alternately in	3
" first dilated and then contracted in -	1
and dilate din - - - - -	5

I have met with notices of one case of poisoning by carbonic acid, one by aconite, and one by oil of bitter almonds, in which the pupils were contracted; and in one dog, poisoned by prussic acid, Mr. Nunnely found that the pupils were contracted.

Contracted pupil is not, then, absolutely characteristic of poisoning by opium, for it may exist in poisoning by alcohol, ether, chloroform, carbonic acid, aconite, and oil of bitter almonds, and *prussic acid?* (in one dog). In all of these, save opium, the pupils are dilated in the extreme action of the poison; and even in poisoning by opium, although contracted pupil be the almost invariable rule, yet now and then a case is met with in which the pupil is dilated. I have, indeed, found notices of two cases of poisoning by opium, and three by morphia, in which the pupils were dilated. I do not include any case before that of Dr. Kinnis, who was, I believe, the first distinctly to report that opium caused contraction of the pupil.

The remaining narcotics always cause dilatation of the pupil, viz.:—belladonna, hyosciamus, stramonium, characterized by cerebral excitement and disturbance; tobacco; digitalis; conium; wourali; *prussic acid*, with the exception noted above; parsnip root; œnanthe crocata; nux vomica, and strychnia.

Valentin considers, from anatomical grounds, and from observation on rabbits, that the contraction of the pupil is due to the reflex function of the brain* through the ciliary filaments from the motor oculi, and that the dilatation of the pupil is due to the reflex function of the spinal marrow through the ciliary filaments from the cervico-spinal nerves. I conceive that this view is borne out by physiological and pathological observations.

A boy was brought dead to this hospital from a recent destructive injury to the brain: the pupils were widely dilated. Here the reflex function of the brain was destroyed, while that of the spinal marrow still existed. Next day I found the pupils of a medium size—a proof, I conceive, that the reflex functions of both spinal marrow and brain were then destroyed.

In sleep or sopor, consciousness and volition are absent, but the cerebral reflex function is still active, and induces contraction of the pupil; but in coma or cerebral disease the reflex function of the brain is often destroyed. I opened the eyelids of a boy asleep and ill with fever, who had passed a delirious night: the pupils were dilated. Next morning, after passing a good night, I found them contracted during sleep: when he awoke, they dilated.

It is not easy to explain the comparative dilatation caused by arousing a person from sleep. I conceive it to be thus:—During healthy consciousness, the reflex functions are controlled by the mind, so that the spinal action of dilatation of the pupil, and the cerebral action of its contraction—each prevails in turn according to the present need. If the control of the mind be removed, as in sleep, the reflex action of the brain predominates, and the pupils are contracted.

Certain poisons—viz. belladonna, hyoscyamus, and stramonium—act immediately upon the brain, disturbing and progressively destroying both its mental and reflex functions. Such poisons invariably cause dilatation of the pupil, owing to the spinal reflex functions being still active.

On the other hand, strychnia so excites the reflex functions of the spinal marrow, that the brain loses control over them: tetanic convulsions ensue, and the pupils are dilated. When the pupil becomes fixed, it is a proof that the cerebral function is suspended.

So long as respiration continues, it is manifest that the spinal marrow, from the medulla oblongata downwards, is still alive. The nerves that supply the diaphragm and all the muscles of respiration that expand the chest, come off from the spinal marrow below the medulla oblongata. It is then erroneous to say that the medulla alone lives at this stage—the spinal marrow is alive also, its functions being necessary to support life. As the action of chloroform increases, costal respiration ceases, and the diaphragm only acts, the functions of the spinal marrow being gradually destroyed from below upwards.

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* By the reflex function of the brain is meant the excito-motory function of that portion of the true spinal system of Dr. Marshall Hall, which is seated above the medulla oblongata.

During the stage of sopor there is frequently rigidity of certain muscles, as those of the jaw; this I conceive to be due to the gradual withdrawal of the control of the mind from the reflex functions.

This rigidity is speedily followed by complete relaxation of all the voluntary muscles, save those of respiration. Mr. Tracey found that even galvinism had no effect in exciting muscular action in the stage of coma. In addition to their influence on the brain, chloroform and ether now have a local action on the voluntary muscles, paralyzing their irritability.

Finally, the respiratory muscles are paralyzed, and absolute death ensues.

The action of the heart, according to the observations of Mr. Wakley, continues two or three minutes after respiration has ceased, and Dr. Percy observed the same phenomenon in the majority of the dogs he destroyed by alcohol; but in four of them, respiration and the heart's action ceased simultaneously. In these cases, the heart, especially its right side, was greatly distended. The heart contracted when the blood was withdrawn.

Dr. Glover injected chloroform into the veins. Respiration and the action of the heart ceased at the same time. The heart was found gorged with clotted blood, and its irritability destroyed. The lungs were congested to a surprising degree, and the bronchi filled with frothy serum.

Dr. Lonsdale poisoned animals by prussic acid. Generally the heart beat some minutes after respiration had ceased: in some instances, the heart's action ceased shortly, owing to the enormous distension of its cavities. On the withdrawal of a little blood, the heart's action was renewed. When he injected the acid into the trachea, the heart's action ceased with respiration, and the right cavities were found to be enormously gorged.

Sir Benjamin Brodie found the heart at rest, and enormously distended, after poisoning an animal by tobacco; on irritating the heart, its action was renewed, and it was kept up for some time by artificial respiration.

I observed the peristaltic action of the intestines still continued in a chloroformized ass after its destruction by pithing.

The stages, then, of the increasing influence of chloroform, ether and alcohol, are:—

Cerebral excitement.

Cerebral derangement; staggering intoxication.

Cerebral sleep (sopor); pupils contracted; dreams; reflex functions of brain and spinal marrow still active.

Cerebral death (coma); reflex functions of medulla and spinal marrow still active.

Death of spinal marrow; cessation of respiration (heart's action still generally present).

Cessation of heart's action.

It is very important to be able to tell easily when the stage of safety sopor is about to merge into that of danger—coma. The action of the pupils is the key to this knowledge. Chloroformization ought not to be continued one instant after the pupils previously contracted have begun to dilate. If unconsciousness can be secured by sopor, the inhalation should not be carried on to produce coma.

If complete muscular relaxation be sought for, as in hernia, to facilitate taxis, in dislocation to make reduction easy, and in tetanus, then it will be needful in general to urge the patient from sopor into coma; but as soon as the muscular relaxation is secured, the inhalation should cease.

When chloroform or ether is employed in chorea, delirium tremens, or other affections, it should never be urged beyond sopor. In Neuralgia it is not usually needful to produce unconsciousness. Whenever the pain disappears the inhalation ought to cease.

Dr. Snow has made this important observation, that the effects of chloroform and ether increase after the administration of it has ceased; this he calls the cumulative property of those vapors. This increase of effect he has observed to last for twenty seconds. Mr. Wakley, in his experiments, observed the same thing. I observed this effect the other day in a woman whose lip was extensively pared under the influence of chloroform. I gave up the employment during sopor, the pupils being still contracted; and in a few seconds coma supervened, the pupils being permanently dilated.

On this ground, Dr. Snow objects to rapid chloroformization. He conceives that the complete effect ought not to be gained in less than two minutes. I own I cannot see how a slow, but effective administration of the vapor, can lessen the danger arising from the still increasing effect after the administration has ceased. The longer the inhalation is continued, the greater the total amount of chloroform received into the system; and this chloroform, already circulating in the blood, will still, I conceive, under either circumstances of quick or slow inhalation, continue to produce an increased effect. Indeed, in the case in which I observed this action, the inhalation had been carried on with intermission some minutes. In another case, in which unconsciousness was produced quickly, the pupil, which had been dilated during one or two seconds, contracted immediately after the cessation of the inhalation.

I think, with my friend Mr. Fearn, that it is important to dilute the chloroform vapor largely with air during the first few inhalations, so as to avoid the sudden shock on the nerves of the lungs, and accustom them to its presence.

After the death in Newcastle, and after the alarming case at Guy's Hospital, related by Dr. Gull, in which respiration appeared to be suspended for some time, we must feel alive to the proper means for restoring animation should it be suspended.

If natural respiration ceases, there is nothing for it but to establish immediately artificial respiration. Ammonia, cold water, bleeding, will be resorted to in vain.

We ought, then, whenever we administer chloroform, to be ready in case of need to perform artificial respiration. I have constructed a chloroform inhaler, which can be immediately so applied on the face, that, by breathing through the external opening, and pressing back the larynx, artificial respiration can be established. The basis of this inhaler is the mask that I invented for the inhalation of ether, which mask Dr. Snow employed in May last.

"This inhaler is made of copper, brass, or white metal. It has a border or face-piece of thin flexible lead lined with oiled silk, covering the nose and mouth, and from its ductility easily adapted to any face. The lower, or inspiring valve, is constructed on the principle of Arnott's ventilators, having a counterpoise weight which keeps it shut, unless acted on by pressure from without. The upper, or expiring valve, is a plain metallic lid, always closed unless acted on by pressure from within. The tube to which this valve is attached may be drawn out so as to expose an aperture for the admission of air when desired."*

To perform artificial respiration with this inhaler, draw out the expiratory tube; imbed the mask firmly on the face—press back the larynx against the œsophagus and spine—inspire deeply, and distend the chest by blowing through the upper tube. Renew the artificial respirations in rhythmical succession, about sixteen in each minute.

As the action of the heart usually continues after the respiration has ceased, artificial respiration will generally restore animation.

It is possible that the cessation of the heart's action, and of respiration, may be simultaneous, owing to the distension of the right cavities of the heart. In such a case, in addition to artificial respiration, the abstraction of two or three ounces of blood from the jugular may relieve the distention of he heart, and permit the renewal of its action.—*London Medical Gazette.*

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* Pharmaceutical Journal, Feb., 1848.

Treatment of Cerebral Inflammation.—Mr. Solly says, in the treatment of these affections the following principles must be attended to:—1. There is no time to be lost, even minutes are of value. 2. Inflammation of the brain being a depressing disease, general blood-letting is not often admissible. 3. Though this may be attended with benefit at the time, the good derived is seldom permanent. 4. Local blood-letting by leeches and cupping is generally useful, and especially in cases of insomnolescence, arising from abnormal action of the brain. 5. In cases of insanity, where opium has failed to produce sleep, leeches and cold applications generally will; and if they do not, it is strong evidence that the excitement arises from hyperæmia, and not from anæmia, as in that of delirium tremens. 6. Anconite and digitalis are the best sedatives, especially when combined with mercury. 7. When it is advisable to salivate rapidly, raise the cuticle by hoiling water, or a similar escharotic, and dress the surface with strong mercurial ointment. 8 Always commence the treatment with a brisk mercurial purgative 9. Soothe the patient's feelings in every way. 10. Never leave anything that is disagreeable to the patient to be done by a nurse or attendant, such as the application of leeches, &c., but persuade him to have them applied. 11. Never lose your patient in the treatment of a chronic case, or try to hasten the cure by increasing the doses. 12. When it is considered necessary to continue the use of mercury for a lengthened period, combine tonics with it.—*Medical Times.*

MEDICAL SOCIETY OF LONDON.

Naphtha in Consumption.—Dr. T. Thompson made some remarks on the use of naphtha in consumption. He had thought it his duty to ascertain, as far as lay in his power, the effects of this remedy at the Consumptive Hospital. With this view, having taken proper precautions to get the agent pure, and to give it as described by its admirers, he administered it in several cases. The conclusions arrived at by these experiments were as follows: In the third stage of consumption it did positive mischief. In a few cases, when the bronchial tubes were affected, and there was much expectoration, it seemed to arrest the secretion, to some extent, lessen the night perspiration, make the pulse fuller and slower, and somewhat relieve the cough: the appetite also improved. In all the stages of consumption, and under other circumstances in the disease, except those mentioned, the naphtha did positive harm. It had no effect whatever on the tubercular disease.

Dr. Golding Bird declared that there never was a greater delusion than to suppose that naphtha was a remedy for consumption. He had employed it, with all the care and caution recommended hy its advocates, and he had never found it of service. The fact was simply this: the pyro-acetic spirit acted in chronic bronchitis just as did other hydro-carbonates, and no better. The tar water of Bishop Berkely had a great reputation in its day, as had also the Barbadoes tar; the fetid gums belonged to the same class, and they all acted as stimulating expectorants to the bronchial membrane. In phthisis, when a cavity was present, much of the cough and expectoration depended on the condition of the bronchial membrane; and hence the origin of the good effects of this vaunted remedy. To say it cured or averted consumption was a mere delusion. All practitioners must have observed that any new remedy, from the confidence excited in the patient, did good for a time, in chronic phthisis. Dr. Bird then showed the fallacious grounds on which naptha had established its temporary fame, and alluded to the singular circumstance that its greatest, and certainly its most scientific advocate, had died of consumption, his favorite remedy having been persevered in to the last.

Mr. Hird detailed the particulars of some cases of phthisis, in which he had been induced to try the effects of the pyro-acetic spirit. In no case did he see any benefit from its use. It must not be supposed, however, that the supporters of naptha employed this remedy solely as extensive counter-irritation over the chest; iron, acetate of lead, and digitalis, were employed at the same time, so as to make it difficult to determine which remedy really did good or harm.

Mr. A. Fisher related some cases of phthisis in which the remedy seemed to be of much service; but there appeared to be considerable obscurity in the diagnosis, in these instances.

Dr. Willshire had given the remedy in a great number of cases of phthisis. It always did harm, and produced nausea and vertigo after having been administered for a period of a week or ten days. In one case of very doubtful character, it appeared to be of temporary service.

Effect of Turpentine in Diabetes.—In the absence of any medicine having any immediate or certain influence over diabetes, any remedy which can mitigate and temporarily arrest, if not cure, this malady, must demand attention. A patient of mine, aged 44, of a scrofulous diathesis, has been suffering from diabetes for ten months, during which period the minimum quantity of water passed daily was nearly two gallons. About six weeks since, alarming hæmoptysis appeared, (phthisis having supervened,) to relieve which I administered spirit of turpentine. With the first dose the quantity of water diminished greatly, and after she had taken two or three doses of turpentine the urine was passed in its normal quantity, though not in its normal condition, as I could still obtain sugar by evaporation. I regarded this improvement in the diabetes as a mere coincidence, but on withdrawing the turpentine the water again increased, and that dreadful thirst, which had been absent, returned.

As the quantity of urine passed continued in very large quantity, I again had recourse to turpentine in the form of Chio turpentine. Instantly, as by magic, the quantity of urine decreased, has remained so, and I well know, that were I to omit the turpentine for one day, two gallons and a half of water would be the result. Would it be worth while for pathologists and physicians to direct attention to the absorbent system in this disease? Is the fact of such excessive absorption of the fluids of the body primary or secondary?—*Letter in the Lancet.*

PATHOLOGY OF THE LIVER.

To show how expedient it is to submit some equivocal-looking livers to either the microscope or other tests, before pronouncing absolutely on any alteration of this kind, I may mention the case of a female, aged 27, who died with phthisis, and whose liver was found to weigh 7lb. 10 oz. It was of an ashy buff color, consistence moderate, but yielding like soft cheese to pressure of the finger; it had little vascularity, but was of a uniform plastic texture. It was at sight declared to be a large fatty liver of some exceptional kind, but the microscope showed no true oil-ovules nor stellar globules, but a mass of little cells and granules. On submitting it, moreover, to boiling and ether, no fat was detected; though on treating a portion with liquor potassæ and hydrochloric acid, an abundance of pure albumen was discovered. It was, therefore, a case of what is called waxy liver,—a true albuminosis, not the result of inflammation, but a vito-chemical deposit.

The mode in which this oil-fat exists normally, and in slightly augmented proportions, is in small ovules in the cells, having a highly refractive power, and these ovules are well depicted by Mr. Bowman, in his plates on this subject. In this normal and primary condition, this deposit seems to consist entirely of what is called *elaine*, which is a liquid oil, till its temperature is reduced to twenty-five degrees; but when the deposit proceeds to any characteristic extent, this liquid oil becomes intermixed with, or holds in solution, a fatty matter of much more consistence, which has a crystalline or stellar appearance under the microscope. This other fatty element does not become fluid till its temperature is raised to 116°, by my trials on several specimens from the liver; and Simon states its melting point at 118°. This modified form of fatty matter is called *margarine* by writers on animal chemistry, and it exists in combination with *olein* in human fat, and in that of the carnivora; while in the ruminantia, the fat called *stearine*, which only melts at about 144°, resides in this class, in combination with *olein*. The different appearance and consistence between beef or mutton suet and human fat or that of the carnivora, or even the hog, sufficiently declare the specialities of the two kinds, chemically as well as economically.

For the reason, then, that *margarine* constitutes the great bulk of livers that are fatty, I would designate this alteration, as an object in pathology, *margarosis* of the organ; though simple *olein* forms the normal deposit, and may be the solvent medium by which the other principle is conveyed to and deposited in a firmer state in the liver.

There is every reason to think that the relative proportions of these two elements vary in the human liver, giving more or less firmness or softness to the affected organ, both during life and after death; but as far as any consistence exists, where this fatty alteration is of any prominency, it is entirely owing to the firmer material, and therefore the alteration may be appropriately styled a *margarosis*.

In the primary stage of this alteration the oil-ovules seem confined to the hepatic cells, but as it advances, they may be observed in the interlobular tissues, while the *margarine* seems to be deposited in masses of round or stellar globules, which encroach upon and usurp the interlobular spaces—the tissues becoming atrophied, and, consequently, the biliary apparatus and function restricted and diminished. Two most important questions about this alteration remain to be shortly considered, and these relate to its physiological causes and pathological effects.

These questions, I am sorry to say, have not advanced further than hypothetical solution. Andral supposed that a sufficient quantity of hydrogen ceases, in phthisis, to be eliminated from the bronchial membrane in the form of aqueous vapor, and hence it is separated in excess from the blood in the liver, and so produces a deposit of fatty matter in that organ.

Liebig's hypothesis, as is well known, is nearly allied to this, only he makes the carbon to be the accumulated and metamorphosed element, and to be deposited in the liver—it becoming increased in amount in the blood from its insufficient oxidation in the lungs in cases of phthisis, in which disease the vito-chemical action of these organs is either long or seriously restricted or impaired. Others again have attributed the accumulation of fat in the liver, in the wasting varieties of phthisis, to the absorption of oil-fat from the other textures and organs of the body, and to its being currently precipitated on the liver, owing to the portal capillaries being relatively of so small a calibre as to arrest the fat-ovules; while some have referred this fatty accumulation to an undetermined catalysis of the liver itself.—*J. Black, in Provincial Med. and Surg. Journal.*

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Epidemic Influenza in England—Registrar General's Quarterly Report.—The fourth return for the quarter ending Dec. 31, 1847, of the mortality in 117 districts of England, has just been issued by the Registrar-General, and is a document more than usually interesting to the medical profession. Within the last few months Europe has been visited by a severe epidemic, and our own metropolis has especially felt its virulence.

Towards the latter end of November, after some singular atmospherical vicissitudes, the influenza commenced its ravages, and carried off in the course of six weeks 11,339 persons. During the whole period the epidemic lasted, 5000 individuals died over and above the average mortality of the season. The greatest intensity was manifested in the second week of its course; raged with nearly equal violence through the third week; declined in the fourth, and then partly subsided; but, the temperature falling, the mortality remained high, not only through December, but through the month of January.

Those upon whom the disease appeared to exercise the most powerful influence were adults and the aged; in the three weeks of the epidemic ending Dec. 18, the deaths under the age of 15 were 2846. In the same two periods the deaths at the ages 15 to 60 were 969 and 1970; at the age of 60 and upwards, 576 and 1999. The mortality in childhood was raised 83 per cent., in manhood 104 per cent., in old age 247 per cent. From the age of 4 to 25, however, the mortality was comparatively not very much increased; at the age of 10 to 15, the healthiest period of life, it was scarcely increased at all—in girls.

It appears from the returns that not only were those enfeebled by previous disease subject to the attack of influenza, but also those of healthy and robust constitutions; these latter, however, from the energy of the vital force, were enabled to resist more effectually the epidemic, while the former more easily succumbed. The poison seemed to pervade the whole system, but affected chiefly the mucous membrane lining the sinuses of the face and head, and the air-tubes of the lungs. Hence those subject to asthmatic paroxysms died, when attacked, in considerable numbers; the deaths ascribed to asthma in October and November were 12 weekly; in the six weeks of the influenza epidemic, 77, 86, 78, 52, 14, 26, besides the numerous cases classed under influenza. The deaths ascribed to bronchitis in the week ending October 30 were 36, and in the nine following weeks, 49, 58, 61, 196, 343, 299, 234, 107, and 138. The deaths ascribed to pneumonia during this time were, 62, 68, 79, 95, 170, 306, 294, 189, 131, and 148. In some of these cases the inflammation specified was the primary disease, in others secondary, and in many it was influenza—misreported. The Registrar-General remarks from these circumstances, that "there is a strong disposition among some English practitioners, not only to localize disease, but to see nothing but a local disease; hence, although it is certain that the high mortality on record was the immediate result of the epidemic influenza, the deaths referred to that cause are only 1157; viz., in the first week of November 2, and in the eight weeks following, 4, 4, 36, 198, 374, 270, 142, 127; and these include nearly all the cases in which influenza was returned, whether as primary or secondary, in conjunction with other diseases. A similar defect has hitherto been found in the returns of all great epidemics: in 1665, the great plague year, 97,306 burials were returned in the London bills of mortality, only 68,596 of which were ascribed to plague. Influenza attacked persons laboring under zymotic diseases: thus the deaths from hooping-cough rose from 12 and 25, to 65 and 71 during the epidemic; the deaths from measles rose from 43 to 96, 89, 69, 75, during the first four weeks of the epidemic, and then subsided to 37 and 58. Typhus, which had been fatal to 70 and 80 weekly, rose to 132, 136, and 131, in the second, third, and fourth week of the influenza epidemic, and then fell to 83 and 74. Although influenza is not mentioned in these cases, it is in others, and there can be little doubt that two or more zymotic processes do often go on simultaneously in the blood and body; a fact of profound interest to the pathologist, and worthy of attentive investigation."

The epidemic, as might be expected, proved more severe in some parts of London than in others; thus its fatality in Lewisham and St. George's-in-the-East was as 1 to 4. This latter district is one of the most unhealthy in the metropolis, in consequence of the filth and wretchedness in which the poor are compelled to pass their lives. In many parts there is no drainage whatever, and sometimes the lower parts of the houses are flooded with water, which, when it recedes, leaves a disgusting accumulation of organic matters in a state of decomposition. Under certain conditions of the atmosphere these, undergoing transformation, produce disease.

The meteorological phenomena were particularly remarkable prior to the breaking out of the influenza. The wind, from the first week in October, had been blowing S.S.W. and S.W.; the weather was very warm; a brilliant aurora was seen, and shook the magnets on the 24th of last month; it appeared eight times during the quarter. On the 16th of November there was a remarkable gloom; the wind changed to N.W., and amidst various changes, still blew from the north over Greenwich at the rate of 160 and 250 miles a day. The mean temperature suddenly fell from 11° above to

10° below the average. On Monday it was 54°; Friday 32°; the air on Friday night 27°; the wind was calm three days, and on Saturday a dense fog prevailed over the metropolis for five hours. No electricity was perceptible during the week. On Sunday, clouds and damp prevailed, the wind changed in the night to S.E. by E., and passed four days over Greenwich at the rate of 200 to 300 miles daily; the temperature suddenly rose, and remained from 2° to 9° above the average through the week ending November 27, when the influenza became epidemic. Extreme cold never increases the weekly mortality in London above 1500; extreme heat still less; intermediate changes slightly. The Novemoer fogs do not give rise to influenza.

The reports received from the provincial registrars show that the epidemic prevailed in most places at somewhat later periods than in London, and that it put on a milder character. At Edinburgh, Dr. Stark states that it suddenly made its appearance, attacking large numbers of the inhabitants, twice during the month of November, on the 18th and 28. On the last occasion severe frost prevailed, with a damp atmosphere and thick fog, which supervened after a few days of very cold weather. The mean temperature of the city was in December, 39°; the highest 57°, the lowest 21°.

In Paris it appeared about the 4th of December, affecting nearly half the population. At Madrid 5000 of the inhabitants were laid up on the 11th of January. The Registrar-General has been furnished by Sir William Burnett with returns of the epidemic on foreign stations, by which it appears that in January and February, 1847, it prevailed on the coast of Portugal and south-east of Spain; January, February, and March, in Newfoundland and New-Zealand; February and March at Valparaiso; April, coast of Syria, July, August, and September, west coast of Africa, south of the equator; August, Hong Kong.

An interesting account is given of the different influenza epidemics which have prevailed in England. The years marked by these visitations were 1728, 1733, 1743, 1758, 1762, 1767, 1775, 1782, 1788, 1803, 1831, 1833, 1837, and 1846–7.

There can be little doubt that, by the carrying out of efficient sanitary measures, the fatality of epidemics in London and other large cities may, to a great extent, be prevented. The Registrar-General warmly espouses this doctrine, and laments that the efforts of her Majesty's Government to introduce such measures were, during the last session of Parliament, strenuously opposed. We look anxiously, but hopefully, to the future. There is a prospect of the abolition of cesspools, the better construction of sewers, and the building of more convenient dwellings for the poor. Sanitary reform, however, cannot be perfect till the tax on light and ventilation be abolished. If ministers should refuse this, after all they have said and done on behalf of public hygiene, their conduct will be thoroughly inconsistent with their protestations, and they will be universally considered the greatest enemies of the cause they advocate.—*Med. Times*, Feb. 19, 1848.

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The Influenza.—This epidemic, after having traversed Northern Europe, has now extended its ravages to Algiers and the northern coast of Africa, as also to Athens and other parts of Greece.—*Med. News.*

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SURGERY.

Luxation of the transverse apophysis of the fourth Cervical Vertebra reduced on the seventh day: with some considerations on the luxations of the Vertebræ in general.

BY DR. SCHRAUTH.

Case.—J. St. B. de B., aged 25, a weaver, was seized on the night of the 26th of February, 1843, by two vigorous men, who wished to throw him out of the door. B., suspended in the air by his two adversaries, put his hands on the jambs of the door; then one of them taking him by the head and neck, and the other by the trunk, they threw him against the wall of the landing place. B. on getting up, immediately complained of a severe pain in the neck, saying:—"They must have torn a piece of flesh from my neck," and could no longer stir his head. A barber, who was consulted the next day, rubbed it with an ointment; but as the stiffness remained the same, and the pain increased, B. went, on the 28th of November, to Dr. T., the distance of a league. To relieve the pain in the neck, he ordered repose, abstinence, bleeding, leeching, cold fomentations, and a saline purgative. In spite of the prohibition of the doctor, the patient returned on foot, although on his arrival he was worn out with fatigue, on the point of fainting, and covered with a cold sweat. Dr. T. went on the following day to the patient, and continued the antiphlogistic treatment; but as the state of the patient was still the same, on the 2d of December made his report to the authorities. The author of this memoir, on the 3d, found the patient lying on the bed, his head turned to the left; he was hoarse, spoke with difficulty, was sensible, and complained of a pain in the nape, and a swelling in the left arm; of a middle size; of a phthisical habit; the muscles flaccid and soft; the neck long and thin; face pale; eyes haggard; the head immovable like a statue, turned to the left, and a little bent forward. He could incline the head a little forward, but every other movement was impossible; the larynx was not too prominent, during deglutition, which was easy in other respects: he experienced a sense of swelling in the pharynx. Examined from behind, the head and shoulders were bent forward a little, the shoulder blades projecting, and the vertebral column much sunken, and a little turned to the left. When the arms were stretched upwards and forward, the vertebral column appeared straight, with the exception of the neck, which was bent to the left and forwards.

On pressing on the shoulders the patient felt a severe pain from the sixth to the second cervical vertebra, and a less severe one from the third to the eighth dorsal vertebra; but this latter, he says, came on later, and is propagated from above downwards. Slight tumefaction and echymosis of the skin caused by leech-bites, covering the third, fourth, and fifth dorsal vertebra. The spinous apophyses of the dorsal vertebræ were arranged in a normal right line; but the spinous process of the fourth cervical vertebra was a little turned to the right and sunk—that is to say, pushed forward. As the patient was very thin, the transverse processes of the cervical vertebræ could distinctly be felt; the fourth was painful, and projecting to the right. The neck was visibly a little bent to the right. No unusual tension of the muscles of the neck; no symptoms of spinal irritation; pulse hard and quick; no appetite; great weakness.

Diagnosis.—Luxation of the fourth vertebra on the fifth in the articulation of their right transverse apophyses, with rupture of the ligaments of that articulation; of stiffness of the neck without lesions of the spinal marrow.

Prognosis.—Very unfavorable; for if the patient were abandoned, then would come on either inflammation, paralysis, marasmus, or at best, a permanent stiffness of the neck, and on attempting reduction, he would run the risk of the greatest danger. Notwithstanding, reduction was decided upon, which was performed with the greatest caution. An assistant pressed on the shoulders of the patient, who was seated in a chair; another pulled the head upwards, whilst M. Schrauth applied his thumb under the right side of the neck, pushed the projecting part backwards and upwards. The patient felt his pains diminish during the traction exercised on the head.

Encouraged by the first result, the patient was made to sit on the ground, two strong cravats passed under his chin, and knotted separately at each side above the ears, were confided to two assistants; another cravat applied to the nape, and twisted in front of the forehead, was given to a third assistant. These three men drew the head directly upwards; a fourth assistant, seated behind the patient, seizing his trunk and shoulders, made counter-extension by leaning with all his weight. Dr. T. was charged with pushing onwards and backwards the right transverse apophysis which projected, and then M. Scrauth, seizing the head with his hands, directed the movements.

The patient held M. Schrauth with his right hand to warn him when he ought to stop the tractions; the stronger they were, the more ease they produced. Whilst they continued thus pulling gently and prudently, they made slight movements forwards and backwards, to the right and left; then they gave the neck a slight turn on its axis. During these manœuvres, which were frequently interrupted, various distinct cracklings in the neck were heard; these movements became easier by degrees without being followed by accidents. The patient then held his neck straight without pain. After someinstants of repose, M. Schrauth seized, without employing much force, the head between his hands, the body being sustained, and repeated the movements so easily that the patient himself soon executed them alone. He could lower the chin as far as the chest, raise the face to see a nail in the ceiling, and turn the head from side to side, so as to see his shoulders. The sinking of the spinous apophysis, and the projection of the transverse apophysis of the fourth vertebra, had disappeared. The success of the reduction appeared proved. B. was put to bed without bandaging; they prescribed glauber salts with nitre, a large bleeding, twenty leeches, and cold fomentations on the neck and upper part of the back.

December 4th. Pains in the neck and back; diminution of the swelling of the left arm; sleeplessness; little thirst; pulse quick.

5th. The pains less; slept for three hours; complete cessation of the swelling; the lymphatic glands of the neck and armpit swelled; pulse soft and slower.

6th. Swelling of the glands more pronounced; the cold compresses replaced by warm applications.

After some days of repose, the patient could resume his occupation without stiffness in the movements of the neck.

The details of this interesting observation appears to us sufficient to prove the truth of the diagnosis of this luxation, which could neither be confounded with a fracture nor with a severe contusion, and we do not think it necessary to follow the author in his long anatomical and physiological dissertation on the part engaged.

On the occasion of this observation, M. Schrauth made bibliographic researches which brought to his knowledge twenty-six other cases of luxations of the cervical vertebræ with his own twenty-seven. In this number, three times death immediately followed the accident; in seven cases, they sank afterwards without reduction being attempted; in three cases the consequences of the accident are not stated; three times there was a cure without reduction of the vertebræ, but the movements of the neck remained confined; in eleven reductions, nine were made with success, and two were followed by death.

Seat.—The luxation took place—

Three times	between	1st	and the	2d	cervical vertebra.
Twice	"	2d	"	3d	"
Five times	"	4th	"	5th	"
Twice	"	5th	"	6th	"
Twice	"	6th			
Once	"	7th			

In the other cases teh seat was not stated.

Direction.—It was four times forwards, twice backwards, six times to the sides; fifteen times it was not recorded.

In the nine individuals (two with paralysis and loss of sensation) with whom the reduction was followed by success, the luxation was twice forwards, once backwards, and four times sideways; and in two cases it is not stated.

The tables speak in favor of the reduction, the more so, as in many of the patients with whom it was neglected, either death supervened afterwards, or life was rendered hopeless by the consecutive accidents.—*Archiv. for Physiologische Heilkunde.*

A new and easy method of applying a Ligature to Uterine Polypi. By W. S. Oke, M. D., *Southampton* —As it is generally admitted that ligature is the safest method of removing polypous growths from the uterus, the remarks of Dr Oke, which are made with the object of facilitating the operation, frequently a troublesome one, will be considered as worthy of acceptation. After describing the instruments in most common use, as the double canula, Levret's instrument, and those of Nissen, Sir Charles Clarke, and Dr. Gooch, he proposes the following modifications.

The instruments are to consist of three metal tubes, two of which are to be of the length, shape, and size of a No. 8 male catheter, except that their sides are to be flattened, and that there be no rings at their lower ends. The curved extremities are to be rounded, each having an orifice in the centre, with smooth edges, and large enough to admit a strong ligature. The third is a stouter tube of the same diameter, eight inches in length, and straight to within an inch of its upper end, which is to be slightly bent and bulbed. A short transverse bar is to cross its lower end, at about an inch from the extremity.

Position of the patient.—Nothing conduces more to the facile use of instruments than a proper position of the patient. She is to be placed on her left side upon a mattress, with her trunk lying transversely across the long diameter of the bedstead, and her ischia upon its edge; the femora are to be well flexed, and the knees half bent and kept separate by a pad or small pillow.

Mode of application.—The two curved canulæ, containing a well-oiled ligature, and exactly fitted together at their flat sides, are to be introduced into the vagina, with the concave surface to the pubes, their curved ends being directed to the anterior part of the stem of the polypus by the fore-finger of the left hand. An assistant takes charge of the left tube, and the ligature being reflected and held between his finger and the canula, he keeps the instrument fixed in its position by pressing it steadily against the arch of the pubes. The right canula, with the ligature lying loose in the tube, is carried round the stem of the polypus, and brought again into position under the arch of the pubes at the *left* side of its fellow. The canulæ are now to be cautiously withdrawn, by depressing their handles towards the abdomen, and as their points are quitting the vagina, the ligature is to be caught between the finger and thumb, and held tense till the canulæ are completely clear of it; it is then, by means of a hooked wire, to be drawn through the third tube at its bulb end, which it guides to the root of the polypus. Having ascertained that no part of the os uteri is included within the noose, and the bulb of the tube being turned to the polypus, the ligature is tightened and secured upon the cross at the foot of the instrument.

The advantages of this method of tying uterine polypi are, First, that it establishes a fixed point for the ligature, close to the os uteri, and which was scarcely attainable by any former method on account of the unsteadiness and mucosity of the surface of the polypus. Second, the length and curve of the canulæ, by which the ligature can readily be slipped round the root of the polypus by the second canula, from the fixed point established by the first. Third, the curves of the canulæ taking the course of the pelvic outlet, gives a freedom to the operation, of which, by the means hitherto employed, it has been comparatively deprived. And, lastly, there is also an advantage in the bend and bulb of the third tube; the former allows a direct action to the ligature, the latter prevents in great measure, all danger of the uterus or vagina being injured by any incautious movement of the patient.—*Ranking's Abstract of the Medical Sciences.*

SURGICAL SOCIETY OF IRELAND.

EXTERNAL DIRECT INGUINAL HERNIA.

(*Communicated to the Surgical Society of Ireland, Jan. 22.*)

Dr. Croker King regretted that he could not exhibit to the society the recent specimen which originated the communication he was about to make. He must trust to one or two drawings in order to illustrate the case.

The form of hernia to which Dr. King was about to draw the attention of the society was generally regarded as a rare or uncommon variety of that disease, but Dr. King observed that he had no doubt that this peculiar description of hernia was of more frequent occurrence than we are at present prepared to admit: he alluded to hernia where the neck of the sac was situated between the epigastric and obliterated hypogastric arteries, and named by authors the superior or external direct inguinal hernia, in contradistinction to the usual form of direct hernia, where the neck of the sac had for its external relation the hypogastric artery, which cord in the case under consideration lay internal to it.

The external appearance of the tumor in this case had all the features of an oblique hernia; it was pyriform, its direction was upwards and outwards, and pressure on it distended the spermatic canal. On dissection, the cremaster was found expanded over the tumor, and this circumstance was an additional inducement to regard the case as a hernia by oblique decent; but the cord was situated on its anterior and external aspect. The society should bear in mind that in form, direction, and coverings, this hernia actually resembled one by oblique descent; the only external circumstance in which it differed was the situation of the cord, and on this circumstance alone Dr. King founded a diagnosis, which was fully confirmed by dissection. Dr. King observed that he was well aware that surgical writers had stated that *occasionally*, but rarely, the cord is situated on the anterior and external aspect of the tumor, in cases of hernia by the oblique descent; but from anatomical considerations, which it would be out of place here to enter into, he was strongly inclined to the opinion that the cases of supposed oblique hernia, in which the cord occupied this unusual position, would, if accurately dissected, have been found to be similar to the case he now detailed.

The principal object he had in bringing this case under the consideration of the society was, that the matter should be followed up, and that whenever an opportunity occurred that the relation of the epigastric artery should be accurately determined in cases of suspected oblique hernia, where the cord lay on the external and anterior aspect of that part of the tumor *situated near to the external abdominal ring.*

Dr. King further observed, that if it was desirable to form a correct diagnosis between direct and oblique linguinal hernia in ordinary cases, surely the one under consideration had additional claims to attention, as from the external position of the neck of the sac, it was brought into more immediate relation with the epigastric artery, than in the usual form of direct hernia, where the protrusion was situated much more internally; in fact, had this individual been the subject of an operation to relieve strangulation at the neck of the sac, if the incision had been carried upwards and outwards, the epigastric artery would *inevitably* have been wounded; or even if the precautionary measure (adopted in doubtful cases by all, in every case by some) of cutting directly upwards was resorted to, the vessel would with *equal certainty* have been divided, as the epigastric artery was found, on dissection, in *close contact* not only with the external but also with the *superior* surface of the neck of the sac.

For the reasons already stated, and from the result of the examination of the case now under the consideration of the society, Dr. King thought that there was sufficient evidence adduced for the exercise of great caution in the division of a stricture at the mouth of the hernial sac, in a case of supposed oblique hernia, where the cord is situated anteriorly or externally.

Dr. King considers that if the views now advanced should be corroborated by future examinations, that we would then have arrived at a point of diagnosis of the greatest value—namely, the determination of the position of a vessel, which, if divided, would bring the life of the patient into imminent danger, and which accident would be almost certain to occur if this form of hernia (the superior or external direct) were confounded with a hernia by the oblique descent.—*Dublin Medical Press.*

MIDWIFERY.

The natural term of Pregnancy.—Most accoucheurs admit that parturition takes place when the infant has reached 270 or 280 days. According to M. Leray, it is not from this circumstance that the duration of pregnancy ought to be reckoned. It would be wrong to attribute that to the number of days which are necessary for the infant to have been in being, or to its bulk, or to the energy of its movements. To arrive at the truth, it is necessary to refer it to the same instinctive and innate cause which every month, at nearly the same period, brings about an engorgement of the uterine vessels, and with it excites the uterus to expel the discharge.

Upon this presumption, M. Leray came to the belief, that the greatest number of accouchements take place at a constant period, which is that of the tenth menstruation, reckoning from the day of the month when the last took place; and in fact, that physician has found the rule confirmed by the observation of seventy-eight confinements, in which he had taken care to mark the last menstrual period.

The determination of this interesting point is not merely a matter of curiosity, but has the importance of a law constantly applicable in practice. Thus, when it is determined to bring about premature delivery, it is less important to ascertain whether the infant is in its seventh or eighth month, (since after the seventh month it is always viable,) than to judge rightly whether Nature be disposed to second the operation; in other words, whether uterine contractions will actually come on, to rouse and to aid in the untimely labor which is required of her. But if, as M. Leray seems to have determined, the term of delivery and that of abortions are determined by Nature, the day for operating is no longer at the choice of the operator—it is dictated to him by Nature, and his duty is to act according to her intimations.

We will now give the conclusions at which M. Leray has arrived, which are—

1. The time of natural, as well as of premature delivery, is directly referable to menstrual periods.
2. The return of these periods, throughout the course of pregnancy, is in relation to the date of the month corresponding to that of the day when the menses began, at their last occurrence, to appear, whatever may be the number of days reckoned in each month.
3. The premonitory signs of labor at full term, and of premature delivery, occur, in the greater number of women, on the day of the month pointed out, or during the seven following days.
4. Nevertheless, the commencement of the expulsive pains may date, in a normal manner, but much less frequently, from the fifteenth day of the tenth month.
5. Every delivery at full term, or premature, which is accomplished before the right period of the month, may be considered as being in advance.
6. Every accouchement which is effected after the seventh day of the same period may be considered as delayed.
7. The preöcurrence of labor is much less common than its delay, and most frequently they do not precede the due time more than five days.
8. Delays, on the other hand, have not such limitations.
9. Lastly, in either case, the causes of advance or delay are very appreciable, although there are cases which it is impossible to fix with certainty.—*Lancet.*

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Premature Puberty.—A short time since I had a little patient, aged three years, and when I was prescribing for her, the mother hinted to me the necessity there was not to administer violent medicine, as the little child was "poorly." I found, on inquiry, that for twelve months this child had been regularly menstruating; and with the permission of the mother I stripped off the clothes, to observe the external organization of my patient.

The mammæ were as healthily developed as in an adult of twenty years; the nates were also developed, the pubes having a slight flush of hair upon them; the labiæ, &c., as in a matured young person; the hymen was perfect, and the vagina anteriorly was of a large size. The countenance was antique, and altogether this babe of three years had the appearance and gait of a little old woman.

I observed the child for a few months; she menstruated regularly, and suffered all the concomitant uterine, lumbar, and other divers aches and pains, as is usual in those who perform this function, as evidencing a capability of uterogestation.—*Mr. Embling in the Lancet.*

MATERIA MEDICA.

Case of Poisoning by Chloroform—Conflicting Medical Opinions.—The case of Hannah Greener, alleged to have died from the effects of chloroform vapour, has already given rise to considerable difference of opinion; an illustration of what has been often before observed—namely, that in cases which attract great public notice, medical men rarely agree about the cause of death. In the first place, it is alleged that the patient was not in a fit state for the administration of the vapor. We cannot discover, in the various reports, any sufficient ground for this allegation. One witness deposed that deceased said she would not have her nail taken off without being rendered insensible. She manifested no unwillingness to take the vapor, but appeared to dread the operation. These are circumstances which we apprehend have existed in some hundreds of cases where ether and chloroform have been exhibited, without deterring the surgeon from operating, and without leading to serious results. Secondly, we have the fatal result referred to idiosyncrasy, but the letter which we inserted from Mr. Potter shows that this girl bore a full dose of ether without suffering from any ill effects; and it is hardly probable that in two narcotic vapors, so analogous in their operation, there would be an idiosyncracy to one and not to the other. A communication from Dr. Snow, appears to us to dispose of this view of the case, and we quite agree with him in thinking that, if idiosyncrasy were admitted as a sufficient explanation of the lamentable result, the confidence of the public in the safe use of chloroform vapor would be justly destroyed; for how is it possible, with the facts proved in Greener's case, to determine *à priori* when this fatal idiosyncrasy is present or absent! Dr. Simpson, on the other hand, considers that the patient died from asphyxia—in fact, that she was suffocated by the attempts to revive her; and that, had nothing been done, she would have recovered. He has, therefore, come to the conclusion, that the girl really died from the *nimia cura medicinæ*: *i. e.*, that she was actually choked by the means intended to restore life. This involves the question of treatment in cases in which chloroform produces such alarming effects. Dr. Simpson advises merely the sprinkling of cold water on the face, and artificial respiration. Dr. Glover, who was the first to experiment on animals with chloroform, and who has given much attention to the subject of poisoning, expressed a strong opinion at the inquest, that the after-treatment employed by Dr. Meggison for the recovery of the deceased, especially in reference to the attempt at bleeding from the arm and the jugular vein, was very proper, and in accordance with the practice of the highest authorities. Artificial respiration is recommended by Mr. Sibson, and might, had there been time, have been used in conjunction with other means on this occasion. We must remember, however, that according to Dr. Meggison's statement, the whole process of inhalation, operation, venæsection and death, did not occupy more than two minutes. We cannot adopt the view that the deceased died from asphyxia, produced by the treatment pursued. Whether bleeding be or be not a proper mode of treatment, the evidence establishes that the patient was dead before the veins were opened. No blood flowed; hence, so far as this part of the treatment is concerned, it is the same as if bleeding had not been attempted. To other parts no objection can be made, *e. g.*, the throwing aside the cloth with the vapor, and dashing cold water on the face. In fact, to believe that the deceased was asphyxiated, it is necessary to suppose that a mouthful of cold water, followed by brandy, "a little of which was swallowed," found its way into the air passages, and prevented her from respiring. This view appears to us to be quite inconsistent with the facts. A mouthful of cold water and brandy, thus administered, would not, we believe, cause asphyxia; and had it so operated in this case, brandy and water would have been discovered in the air tubes on inspection. The plain and undeniable inference appears to us to be, *that the deceased was poisoned by chloroform vapor*. It is of no use attempting to place the facts before the public in any other shape. The post mortem appearances coincide with what might have been expected from those met with by Dr. Glover, in 1842, in his experiments on animals poisoned by chloroform. We have already assigned reasons why we do not think that idiosyncrasy had any necessary connection with the fatal result. It bears out the view expressed by Dr. Simpson, in a paper lately published, to the effect that if chloroform be exhibited in too strong a dose, and given uninterruptedly for too great a length of time, it will produce serious consequences, and even death. We agree with Dr. Snow, in thinking that the vapor was probably here given in too concentrated a form, and too rapidly; and that it thus destroyed life. This appears to us to be the only reasonable explanation of the facts.—*London Medical Journal.*

Death of a Boy from Chloroform.—The following instance of death from the improper use of chloroform occurred at Aberdeen on the 8th inst. A lad about 17 years of age, an apprentice to a druggist in the town, has been in the habit of inhaling chloroform almost daily for some time, for the sake of the excitement and pleasurable feelings he experienced from its use. He was observed "staggering about the shop all the morning" as if intoxicated, which was attributed to frequent inhalations of small quantities of chloroform by his companions—but this is not certain. About noon to-day, while there was no person in the shop with him but a boy about 12 years of age, he poured a considerable quantity on a towel and applied it to his face. At this time he was standing by the counter and leaning towards it, so that when insensibility was produced he appears to have fallen forward with his face on the towel with the chloroform. The boy who was with him in the shop at the time, says that he remained in this position for about ten minutes, he being afraid to disturb him, as he always became very violent when any person touched him while he was under the influence of chloroform on former occasions. When raised, he was found apparently lifeless, and medical men were sent for in various directions. In about five minutes, (fifteen minutes after he began to inhale the chloroform,) Dr. Jamieson saw him, and found him pulseless—the doctor not being able either to feel or hear the beating of the heart—but the surface quite warm, and the lips very livid. On opening a vein in the arm, a few drops of blood only escaped. Dr. J. immediately introduced a pipe into the trachea from the mouth, and kept up the respiration for 15 or 20 minutes, without being able to perceive the slightest signs of life. Besides these means, the application of strong liquor ammonia to the nostrils, &c., were had recourse to. Dr. Keith arriving almost immediately after Dr. J. had desisted from the use of the artificial respiration, it was deemed advisable to keep it up still longer. An opening was consequently made into the windpipe through which a tube was introduced, and in this way the inflation of the lungs was kept up for more than an hour without the slightest effect. Four or five medical men having arrived soon after Dr. Keith, all assisted in keeping up the respiration, and every other suggestion which was likely to be useful under the circumstances was attended to without effect. After the most careful inquiries of an intelligent young man belonging to the same shop, and who saw the chloroform bottle shortly before 12 o'clock, but who was not present at the time of its fatal inhalation, it appears that the quantity poured on the towel "could not have exceeded 3 drs. or ½oz" I suspect no great faith can be placed on this, however, although the person affirms that "he hardly missed it from the bottle." The bottle is large, having a diameter of about four inches. It appears that the deceased was in the habit of inhaling the chloroform so frequently that the bottle had to be hid, but that he discovered it this morning. The liquid appears to be less pure than that manufactured in Edinburgh.—*Scotsman.*

Two views may be taken of the cause of death in this instance: 1—either that the deceased died from an overdose of chloroform vapor, or 2—that being stupified by the vapor, he fell forward on the cloth, and was asphyxiated, in consequence of the cloth preventing respiration. In our opinion it appears more probable that he was poisoned by chloroform vapor, which he must have breathed until respiration ceased. Dr. Jamieson, to whom we are indebted for an account of the case, has promised to send us a report of the post-mortem examination.—*Med. Gaz.*

ON MURIATE OF OPIUM.

BY J. G. NICHOL, M. D., OF CROOK, DURHAM.

During the last ten or twelve years I have made and prescribed a solution of opium, which I think is not mentioned in any work on materia medica with which I am acquainted. I use powdered Turkey opium and water, pretty strongly acidulated with muriatic acid. I have found, by experience, that this is the best anodyne I am acquainted with. I see, by Dr. Pereira's Materia Medica, that mention is made of Dr. Porter's solution of opium in citric acid. I made and used the same sort of preparation, ten years ago; but it did not answer; it caused a great deal of headache and other unpleasant symptoms; moreover, it became muddy, and appeared to be decomposed; therefore I gave up using it. I have called this preparation of mine "Muriate of Opium," but perhaps it is not a very correct name. I may mention that I prepared solutions of opium with acetic, nitric, sulphuric, citric, tartaric, and muriatic acids, and also prescribed them, but the muriatic solution was vastly superior to any one in every respect. All of them produced *headache*, with the exception of the *muriatic.* I prefer muriate of opium to the tincture, wine, or powder, of opium, and also the muriate and acetate of morphia; in fact, to any other preparation of opium. It never makes my head ache, but all the other preparations do.

My preparation is made according to the following formula:

Take of the best powdered opium, ℥j.
Muriatic acid, ℥j.
Distilled water, ℥xx. Mix.

Shake this mixture very frequently every day, during fourteen days, then strain and filter. The dose is from twenty to forty drops, according to circumstances. Many of my medical friends have tried this preparation, and they highly approve of it. I have taken the liberty of sending you a small quantity as a specimen.—*Pharm. Jour.*

MISCELLANEOUS.

Curious Fact of Natural History.—M. Dumeril, at a late meeting of the Institute, reported upon a memoir of M. Boursier, referring to the singular fact of the silk worms' eggs, which were not fecundated, and still were fertile. M. Duméril observed that this was not an isolated or even uncommon circumstance; he had remarked that the females of insects of very different kinds, but particularly amongst the nocturnal lepidopteræ, produced occasionally fertile eggs soon after breaking through their crysalis. The insect of this species found in summer upon plants are all females and fecundated; it is only in autumn that the males appear. They couple, and the females bring forth eggs which produce in spring female individuals, who do not require to be fecundated to be fruitful. This may continue for several generations, even as far as ten successive births of female individuals, without fecundation.—*Med. Times, Nov.* 20, 1847.

Faculty of Medicine of Paris.—Professor Orfila, Dean of the Faculty of Medicine of Paris, has been removed from his office by the Provisional Government, and Professor Bouillaud appointed in his place.

On the Influence of the Penitentiary System upon the production of Insanity.—M. Collineau read to the Academy of Medicine, in January last, a paper by M. Joret, Physician of the Prison of Vannes, treating of the influence of the penitentiary system upon the production of insanity.

The prison of Vannes was very salubrious and well situated; it contained, on the average, 318 female prisoners, sleeping in nine wards, taking their meals in one refectory, and assembled in one work-room at needle-work, knitting, and picking oakum. The food was wholesome, and sufficiently abundant. The prisoners were strictly enjoined to preserve, day and night, absolute silence; it was the rule of Aubrun, less the solitary confinement. The punishment was the same, with the exception of corporeal chastisement, which had been abandoned. Each day the prisoners had two recreations, each of half an hour, during which they were permitted to walk in silence one by one. Two things, therefore, deserved notice; first, the absolute privation of intellectual communication between the prisoners; and, secondly, insufficient bodily exercise. Since the prison had been opened from June 20th, 1842, up to June 20th, 1845, 872 persons had been admitted; of whom 414 had been liberated, nineteen had been pardoned, twenty-five had become insane, eight had been placed in other houses of correction, and eighty-one had died Thus, upwards of eighty deaths had been recorded, and every year an average of eight cases of insanity had been observed, out of a population of little more than 300 adult prisoners.

After enumerating the predisposing causes of insanity, a bad education, worse examples, a profligate life, and also "hereditary," M. Joret considered as determining causes the absolute silence enjoined in the prison, the grief of the prisoners increased by this rule, and the absence of proper exercise. M. Joret forwarded thirty cases of insanity, classed according to their determining causes. The first division, comprising mental aberration, attributed to the rule of absolute silence, contained six cases of mania and eight of monomania. The second division, viz., insanity produced by violent sorrow, increased by this rule, contained two cases of maniac delirium, one of mania, and seven of monomania. The last division, insanity from want of exercise, presented one case of acute mania, and six of monomania. Of the entire number, eight patients only had been cured. From these cases, M. Joret thought himself authorized to conclude that the penitentiary system at present adopted in the prison of Vannes, causes insanity; and, from statistical researches, he arrived at the conclusion that the system of cellular imprisonment (solitary confinement) was far from giving such a large number of cases of madness.

The reporter, adopting to a certain extent the opinions of M. Joret, did not think that the time was yet arrived when any decided judgment could be formed between the two rival systems.

M. Nacquart thought these conclusions were too exclusive; what he had seen in the London penitentiaries could not permit him to adopt them.

M. Ferrus gave some explanations on the system adopted in French penitentiaries; it was the rule of Aubrun—that is, silence and labor in common during the day, and solitary confinement at night. The number of the inmates was, however, an obstacle to this second part of the rule, and they were placed in common sleeping-rooms The beds were not sufficiently distant, and the temptation to communicate with each other became almost irresistible: hence severe punishment, solitary confinement, and privation of food; hence, also, disease, insanity, and death. The establishments visited by M. Nacquart were not by any means regulated by so severe a system.

M. Rochoux observed that solitary confinement led to insanity; in the United States the system has been abandoned for that cause. Solitude predisposed the mind to unwholesome excitement; in former days, hermits and ascetics became mad.

M. Londe contended that solitary confinement was an unjust and odious measure. The inspectors of prisons only defended the system because they were paid for it.

M. Nacquart answered to M. Rouchoux, that hermits of old were mad before ever they retired to the desert; a measure generally useful should not be set aside on account of accidental occurrences.

M. Baillarger thought the question of solitary confinement too important a one to be thus unexpectedly discussed in the academy without preparation; he hoped that another day would be appointed for the examination of this subject. The frequency of cases of insanity in penitentiaries did not appear to him so considerable an objection as it was generally thought, to solitary confinement. Since prisoners were carefully examined at the time of their first admission into penitentiaries, it has been ascertained that a great number of those whose madness had been attributed to cellular confinement, had been deranged before their entrance into prison, and sometimes even gave evident signs of insanity at the time of their admission. M. Lécut's researches had shown that insanity was far more frequent in prisons, than amongst the free population: misery, reckless passions, and a vicious intellectual and moral organization, were the causes of this difference. He was, besides, with M. Nacquart, of opinion that, even if it was proved that in penitentiaries madness was a little more frequent, that would not be a sufficient reason to abandon solitary confinement, from which, in other respects, great advantages were obtained. The mortality of the central prisons and of the hulks was certainly greater than that of the free population, and still no one had presented this as an argument against these two forms of punishment.—*Med. Times, Jan.* 15, 1848.

ADULTERATIONS OF DRUGS.

We published last week a Circular of the College of Pharmacy of New York, in which that learned body sets forth at great length the various and serious adulterations of drugs and chemicals imported into the United States from England.

The perusal of that circular has filled us with sad reflections. The allegations contained therein are of a kind to create serious alarms for the proper treatment of diseases even in this country, for it would be idle to fancy that drugs are adulterated exclusively for exportation to America, as some of our correspondents would seem to suppose; although, were the adulteration of drugs even exclusively confined to those intended for the foreign market, the case would be just as bad; and we must beg to differ *toto cœlo* from one of our correspondents, who will have it that if the Americans insist upon a cheap article, they must rest satisfied with any vile compound the English drug-manufacturer may choose to send. We would remind our correspondent that in the matter of drugs, which may most probably become the arbiters of life and death, or which is, perhaps, of greater importance still, of health and disease, no mere £. s. d. argument will hold good to excuse those who obey the commands of the "market," instead of following the dictates of honor and conscience. We can hardly think without shuddering of the evils that this most pernicious system of adulterating drugs inflicts upon society; and we cannot and will not admit the spurious plea of necessity, in justification of those who pursue this system, no matter whether the adulterated drugs be intended for home consumption or the foreign market. We can very well understand that wholesale druggists may be exceedingly reluctant to refuse a large order, although the prices offered may happen to be even considerably below the cost of production of the genuine articles; and we are quite aware of the fact that a most mischievous system of unfair competition and underselling has of late obtained so largely in the drug trade, that many of the most respectable firms find it exceedingly difficult to maintain their ground against unscrupulous competitors. But surely no one will venture to assert that the adoption of a universal system of adulteration is the proper remedy for such a state of things! We imagine it would prove much more advantageous and profitable in the end, were all respectable firms to refuse positively supplying articles at a lower price than they can justly and fairly be sold at if pure and genuine. Let the large body of honorable and respectable druggists, both wholesale and retail, unite to petition for the interference of Government to put a stop to the manufacture and sale of adulterated drugs and chemicals, and let the dealing in spurious articles in the meantime be exclusively left in the hands of the unscrupulous.

It is indeed time that a stop should be put to the adulteration of drugs, as the evils which spring from it are of incalculable magnitude. We find among others, in the circular above alluded to, the following remark :—" Is it wonderful that such enormous doses as we hear of, are taken, and indeed required, in the West; and that disappointment everywhere is experienced, by physicians, in the action of medicines?"

Indeed, it is by no means extraordinary that drugs such as are described in that circular, will refuse to answer the expectations both of physicians and patients. How many most excellent medicines have fallen into desuetude, because physicians found themselves disappointed in the result of their application, owing, of course, simply to the substitution, on the part of some dishonest manufacturer or dealer, of a spurious article for the genuine curative agent. Only a few weeks since, when the marvellous properties of chloroform were introduced to the attention of the profession and public, we had occasion to remark on the dishonest practice of some chemists to palm upon the public a spurious article, instead of chloroform. We happened at the time to meet two physicians, in rather extensive practice, who both expressed themselves greatly disappointed in their expectations of the new agent. Upon examining the "Chloroform" which they had used in their experiments, and which had been supplied to them by a house that styles itself "respectable," we found it to consist of simply impure chloric ether.

We may have occasion to return to this subject again.—*London Phar. Times and Jour. of Chem., Dec.* 18, '47.

Jury of Matrons.—The Jury of Matrons was recently revived in England by Mr. Baron Platt, at the Old Bailey, in the case of a female named Hunt, who pleaded pregnancy in bar of execution. The learned matrons followed the advice of the judge in using their "best skill;" and in about half an hour they came to the conclusion that the convict had not a living child within her. Mr. Baron Platt, apparently satisfied with the unanimous verdict of these ignorant women, ordered that the law should take its course. Subsequently, by an order from the Secretary of State, the prisoner was examined by professional men, and found to be pregnant. She was thereupon respited. The following paragraph from a recent number of the *Times* will show that the matrons were again in error, and that the medical opinion was correct :—

Mary Ann Hunt, who was sentenced to death for the murder of a woman named Stowell, and who was declared by a jury of matrons not to be *enciente*, was on Tuesday the 28th of December, delivered of a fine male seven months' child. The mother and infant are both doing well. It will be recollected that the sentence was some time since commuted to transportation for life —*London Med. Gaz., Jan.* 1848.

Medical School of Galata Serail at Constantinople.—The *Gazette des Hôpitaux*, (August 26th, 1847), contains an interesting account of the visit of the Sultan, accompanied by all his ministers and high functionaries to this school, at the general examination and distribution of prizes, at the close of the ninth session,—a visit annually made,—and also the report of the first professor, Dr. Spitzer, to the Sultan on the state of the school. It appears from this report, that the number of students was 454; 409 were residents, (314 Mussulmen, and 95 Greeks, Armenians, Catholics and Israelites,) and 45 externes, who attend the school without lodging in it, but who enjoy, at the termination of their studies, the same advantages as the internes;—a place in the medical service of the empire is assured to them, and they obtain a grade from that of lieutenant to that of colonel, without distinction of religon.

Disinfecting Fluids.—The question of disinfecting the wards of fever hospitals by different metallic compounds which have of late been puffed into a most undeserved notoriety by parliamentary and other documents, has received a fearful solution in the death from fever, of one of the most active experimentalists—Colonel Calvert. This gentleman, who, unfortunately for himself, supposed that the poison of fever was as easily decomposed by a solution of nitrate of lead as sulphuretted hydrogen, and who had heen officially sent to Canada, in company with Mr. Ledoyen, to test the efficacy of this liquid in destroying infection, has fallen a victim to his excess of zeal. M. Ledoyen has himself suffered from an attack of typhus, and is now, as we learn, from the *British American Journal*, on his way home to England. No report of the results of this mission is required: the fact that both of the Commissions were attacked with fever, and that one died from the effects of a febrile poison, which a rag dipped into a solution of nitrate of lead was utterly unable to destroy, is a sufficient proof of the futility of all such schemes. We hope that the fate of Colonel Calvert will serve as a warning to the patentees of other disinfecting fluids.—*London Med. Gaz., Jan.* 1847.

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Mortality among Physicians.—We have already noticed the great number of physicians who have fallen victims to the faithful discharge of their arduous and dangerous duties during the last year, and we are sorry to have to add, that death continues to make sad ravages in the ranks of our professional brethren. During the late epidemic fever in Ireland, it is stated that of twenty-seven physicians attached to fever hospitals and districts in the province of Ulster, attacked with fever in the discharge of their duties, fourteen, or more than one-half, died, leaving nine widows and thirty-seven children, for the most part but scantily or not at all provided for. These gentlemen have fallen a sacrifice to the faithful discharge of duties entrusted to them by the puhlic, in the endeavor to restore health to the sick, and administer relief to the dying.

—

Coffee as a disinfecting or anti-bromic agent.—By Frederic Weber.—Coffee is one of the most powerful means not only of rendering animal and vegetable effluvia innocuous, but of actually destroying them. A room, in which meat in an advanced degree of decomposition had been kept for some time, was instantly deprived of all smell on an open coffee-roaster being carried through it, containing a pound of coffee newly roasted. In another room exposed to the effluvium occasioned by the clearing out of a dung-pit, so that sulphuretted hydrogen and ammonia in great quantity could be chemically detected, the stench was completely removed within half a minute on the employment of three ounces of fresh-roasted coffee; whilst the other parts of the house were permanently cleared of the same smell by being simply traversed with the coffee-roaster, although the cleansing of the dung-pit lasted for several hours longer. Even the smell of musk and castoreum, which cannot be overpowered by any other substance, is completely dispelled by the fumes of coffee; and the same applies to the odors of assafœtida. It was remarked, however, that in general animal effluvia are more readily affected by it than vegetable.

That here an actual neutralization, and not a mere envelopment of matter, takes place, is shown from this—that the first fumes of the coffee are imperceptible, and continue so until a point of saturation, so to speak, is reached, whereupon the obnoxious smell disappears, and that of coffee predominates. The reverse happens with other aromatic vapors, and even with acetic acid and chlorine. Here both co-exist until the one completely preponderates.

The simplest form in which to use it against contagious matter is in powder. The well-dried raw bean is to be pounded in a mortar and to be strewed over a moderately-heated iron plate, until the powder assumes a dark-brown tint. Caffeic acid, and the empyreumatic coffee-oil, act more readily in very minute quantity.—*London Med. Gaz., Jan.* 1848.

Subsidence of the Cholera in Europe and Asia.—Intelligence has been received from St. Petersburg up to the date of the 29th January, (17th, O. S.) The following remarks on the subject of the cholera have been published by Dr. Thielmann, in the *Russian Medical Gazette.*

During the month of December the severe cold so completely arrested the progress of Asiatic cholera, that there was reason to believe it would disappear entirely. It has altogether ceased in the provinces around the Caspian; and with the exception of Moscow, Mohilew, and Witepsk, it is no longer met with in any of the great cities or towns of the empire. Even in these, and in smaller places, the disease has assumed so mild a character that it appears to be on the point of extinction.

Letters from Constantinople of the 1st January announce the gradual disappearance of cholera in that city. The epidemic was then chiefly confined to the Arsenal; and out of 210 attacked, only 58 died. Accounts from Bagdad of the 7th December state that the cholera had almost entirely disappeared from Kerkoula and Suleymania. Letters from Mossol, dated the 12th of December, mention that the cholera had ceased in that city, after having killed 300 persons; and intelligence from Aleppo of the 18th, states that it has appeared at Beregik, on the banks of the Euphrates, and was causing from ten to fifteen deaths daily.

On the whole, this intelligence is highly favorable.—*Lond. Med. Gaz.*

Insanity not a result of the Separate System of Imprisonment.—From a report on the Pentonville Prison, it appears that in the first year, (1843,) of 332 convicts, the daily average in the prison, three became affected with insanity. In 1844, when the daily average was 456, no case occurred. There was one in each of the two following years, when the daily averages were respectively 445 and 423. In 1813, the cases were in the proportion of 9.03 per 1000. During the whole period (four years and a quarter) since the prison was opened, the proportion of cases to the daily average of prisoners has been that of 2.29 per 1000 annually. From the end of 1843 to the present time the annual proportion has been no more than 1.48 per 1000. If we compare the amount of mental disease in the army, where it can be accurately ascertained, we shall find that per 1000 it is nearly 1 among the dragoon guards in home service, 1.43 in the Ionian islands, 1.33 in Canada, and 1.41 in Gibraltar. The statement, therefore, that the separate system tends to produce insanity, has no foundation in fact.—*Lon. Med Gaz.*, *March*, 1848.

Resection of the head of the Femur.—This operation has been performed by M. Roux, at the Hôtel Dieu on a child fifteen years of age, laboring under spontaneous luxation of the femur on the iliac fossa, consecutive to coxalgia.—*Gaz. des Hôp.*, 25th Feb. 1847.

Obituary Record.—Died, Jan. 29th, of typhus fever, caught in the discharge of his professional duties, Dr. Joseph Bell, one of the most distinguished medical practitioners of Edinburgh. Dr. Bell was the youngest son of the late Dr. Benjamin Bell, the Liston of his day, one of the most celebrated operators and practical surgeons that Scotland can boast of. His mother was a daughter of Professor Hamilton, who filled with distinction the Chair of Divinity in the University of Edinburg, so that by parentage, as well as by professional celebrity and personal labors, the name of Dr. Bell has long been intimately connected with the medical renown of the Scottish metropolis.

Jan. 16th, at Baldock, aged 60, Robert Innerarity, Esq. Mr. I. had scratched one of his fingers, and afterwards dressed the arm of a patient affected with phlegmonous erysipelas. Shivering occurred the following afternoon, diffuse inflammation of the cellular texture supervened, and he died on the eighth day of the attack.

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